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# HALAL MEAT CONSUMPTION DECISION-MAKING AMONG MUSLIM CONSUMERS IN BELGIUM

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Het beslissingsproces van moslimconsumenten ten aanzien van halal vleesconsumptie in België

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# TABLE OF CONTENTS

# ABREVIATIONS

| | |
|---|---|
| ANT | Actor-Network-Theory |
| CV | Contingent Valuation |
| CT | Conventions Theory |
| EMB | Muslim Executive of Belgium |
| HACCP | Hazard Analysis Critical Control Points |
| HCP | Halal Control Points |
| HVM | Hierarchical Value Map |
| M | Mean |
| MEC | Means-End chain |
| PBC | Perceived Behavioural Control |
| SD | Standard Deviation |
| SN | Subjective Norm |
| TFQM | Total Food Quality Model |
| TPB | Theory of Planned Behaviour |
| TRA | Theory of Reasoned Action |
| WTP | Willingness-to-pay |

# LIST OF FIGURES





# LIST OF TABLES

# SAMENVATTING

In consumentengedrag literatuur is men het erover eens dat cultuur, en meer bepaald religie, de manier waarop consumenten zich gedragen beïnvloedt. Religie is de belangrijkste determinant van voedingsvermijding, -taboes en speciale richtlijnen vooral wat vlees betreft. Bovenop de vijf pijlers in Islam[1] worden moslims geacht dergelijke voedingswetten te volgen gericht op het verbeteren van hun welzijn. Zo is de consumptie van alcohol, varken, bloed, kadavers en vlees dat niet volgens de Islamitische richtlijnen is geslacht verboden. Halal (toegestaan voor moslims) als productkenmerk verwijst naar de aard, oorsprong en productiemethode van voeding voor moslimconsumenten vergelijkbaar met biologische, diervriendelijke of duurzame voeding.

Hoewel deze religieuze richtlijnen vrij strict lijken, worden ze door heel wat gelovigen toegepast. Naar schatting 75% van de Amerikaanse moslims volgt de dieetregels wat betekent dat zelfs na migratie, een overgrote meerderheid van de moslims nog steeds halal eten.

Ondanks het groeiende belang van het wereldwijde halal marktsegement in het algemeen en in Europa in het bijzonder, werd weinig onderzoek gevoerd naar de voedingsconsumptie bij moslimconsumenten. Zo is de rol van religie in het consumptie beslissingsproces van vers halal vlees onduidelijk. Is halal vlees consumptie voornamelijk religieus geïnspireerd of zijn er nog andere motivaties? Naast deze vraag gaan we ook de invloed van acculturatie op dit beslissingsproces na gezien de Belgische Moslimgemeenschap voornamelijk uit migratie is ontstaan en we vandaag de dag toe zijn aan tweede en derde generatie. Blijven jonge moslims halal eten en waarom. Halal is een typisch geloofskenmerk dat de consument niet kan nagaan noch voor noch na consumptie. Hierdoor kan kwaliteitsonzekerheid ontstaan: is halalvlees wel degelijk halal? Deze onzekerheid kan verminderd worden via een gecertifieerd halal label. We gaan daarom ook na wie volgens de Belgische Moslimconsument het meest geschikt zou zijn om de Belgische vleesketen te controleren en certificeren met een dergelijk label tot gevolg en of ze bereid zijn hiervoor een meerprijs te betalen. Ten slotte onderzoeken we of hedendaagse vleesconsumptietrends (gemak, gezondheid, nood aan informatie, veiligheid) ook gelden voor moslimconsumenten. Kortom, de doelstelling van deze thesis is om halal vlees consumptiegedrag bij moslimconsumenten, voornamelijk in België. Het Total Food Quality Model (Brunsø, Fjord & Grunert, 2002) wordt hiervoor aangewend omdat dit model beschouwd wordt als het meest adequate raamwerk voor de analyse van voedingskeuze bij consumenten.

Een eerste hoofdstuk (*hoofdstuk 2*) presenteert de manier waarop de vleesketen zou aangepast moeten worden aan de Islamitische voorwaarden voor halal productie en distributie. De zo ontstane productiestandaarden en -normen moeten via een geïntegreerd kwaliteitssysteem gebaseerd op HACCP-principes (Hazard Analysis Critical Control

[1] De 5 pijlers van de Islam zijn: shahada of geloofsbelijdenis, salaat of bidden, ramadan of vasten, zakaat of liefdadigheid en hajj of bedevaart.

Points)[2] gecontroleerd worden zodat ze uitmonden in de halal vlees status. Deze status kan aan consumenten meegedeeld worden via een label dat kwaliteitsonzekerheid tijdens de aankoop kan reduceren. Maar deze evolutie wordt vertraagd door technische beperkingen, uiteenlopende opinies van de betrokken stakeholders, een gebrek aan onafhankelijke controlemechanismen en gebrek aan kwantitatieve informatie over de behoeften en voorkeuren van Moslimconsumenten.

Om aan de doelstelling van de thesis te voldoen werden vijf studies uitgevoerd (twee kwalitatieve en drie kwantitatieve). Resultaten van de tweede kwalitatieve studie (drie focus groepen in België, Nederland en Frankrijk respectievelijk) worden enkel aangewend ter verduidelijking van de hypothesebespreking in het discussie hoofdstuk.

Resultaten van de eerste kwalitatieve studie (*hoofdstuk 3*) tonen aan dat hoofdzakelijk gezondheid, geloof en respect voor dierenwelzijn moslimconsumenten motiveren om halal vlees te kopen. De impact van religie in een migratiecontext op het halalvlees consumptie beslissingsproces werd verder onderzocht via 2 kwantitatieve studies in Frankrijk (pilootstudie) en België (2$^{de}$ studie) aan de hand van de Theory of Planned Behavior[3] met speciale aandacht voor zelfidentiteit (religie) en acculturatie (migratiecontext). Resultaten van deze studies worden gepresenteerd in *hoofdstuk 4* en tonen aan dat een positieve houding tegenover halal vlees consumptie, de invloed van peers en een gepercipieerde controle over het eten van halal vlees de consumptie van halal vlees bij Franse moslims bepaalt. In België blijken het gepercipeerde tekort aan inspanningen met betrekking tot voedselveiligheid of het beperkte geloof in veiligheidscontrole potentiële barrières voor het eten van halal vlees. Halal vlees consumptie in België wordt voornamelijk bepaald door een positieve houding tegenover de gezondheid van halal vlees. Door het splitsen van de totale steekproef in groepen met lage versus hoge zelfidentiteit en lage versus hoge acculturatie worden verschillende beslissingsmodellen voor de vier groepen bekomen.

Het volgende hoofstuk (*hoofdstuk 5*) onderzoekt het geloof van Belgische moslims in informatiebronnen van halal vlees en hun vertrouwen in de belangrijkste actoren en instituties die de Belgische halal vleesketen zouden kunnen controleren. De resultaten tonen aan dat Islamitische instituties en vooral de Islamitische slager het meest vertrouwd worden zowel voor de controle van de keten als voor informatieverstrekking. Gebaseerd op het vertrouwensniveau werden vier marktsegmenten geïdentificeerd: 'onverschillige' consumenten (29.1%), 'bezorgde' consumenten (9.7%), 'vertrouwensvolle' consumenten (33.1%) en 'Islamitische idealisten' (26.7%). Onverschillige consumenten zijn niet echt eenduidig over wie de controle van de halal vleesketen op zich zou moeten nemen en zij staan het meest open om in de supermarkt halal vlees aan te kopen. Bezorgde consumenten vertonen een hoger vertrouwen in Belgische dan in Islamitische instituties wat geassocieerd wordt met een gepercipieerd tekort aan informatie, slechte hygiëne en

[2] HACCP staat voor de analyse van kritische punten in het voedingsproductieproces waarop extra goed gelet moet worden teneinde mogelijke gevaren voor de voedselveiligheid te vermijden.

[3] Theory of Planned Behaviour of de theorie van gepland gedrag voorspelt weloverwogen gedrag via 3 basis variabelen: houding tegenover het gedrag, de subjectieve normen en de gepercipieerde controle die men heeft over het uitvoeren van het gedrag.



bezorgdheid omtrent voedselveiligheid als barrières om halal vlees te kopen. Vertrouwensvolle consumenten vertonen een duidelijke voorkeur voor Islamitische instituties om de keten te controleren en te communiceren. Islamitische idealisten tenslotte worden getypeerd door jonge, tweede generatie consumenten met een hoge Islamitische zelfidentiteit en verschillen van de andere segmenten door hun hoog wantrouwen in Belgische instituties voor de controle.

Eens een kwaliteitscontrolemechanisme in werking wordt gezet voor de Belgische halal vleesketen, gaat mogelijks de consumentenprijs voor halal gelabeld vlees stijgen. De laatste kwantitatieve studie gaat daarom na of moslimconsumenten bereid zijn om een meerprijs te betalen voor gecertificeerd halal gelabeld vlees zowel bij de Islamitische slager als in de supermarkt en of ze bereid zijn halal vlees aan te kopen in de supermarkt. De resultaten (*hoofdstuk 6*) tonen aan dat veel meer moslims bereid zijn een meerprijs te betalen bij de Islamitische slager (62.9%) dan in de supermarkt (35.3%). Hoe meer belang wordt gehecht aan een halal label en hoe groter het wantrouwen in de huidige halal vlees status is, hoe groter de kans is dat een moslimconsument een hogere prijs aanvaardt voor gelabeld halal vlees bij de slager. Ook halal vlees consumptiefrequentie en leeftijd beïnvloeden op een positieve manier de meerprijs die een moslim bereid is te betalen. In de supermarkt wordt de bereidheid tot meerbetalen beïnvloed door wantrouwen in de status van halal vlees en de verwachte voordelen om te shoppen in de supermarkt. De resultaten tonen ook aan dat de huidige kwaliteitsgarantie over de status van het halal vlees ook de belangrijkste reden is om geen meerprijs te willen betalen. Moslimconsumenten die dus voldoende vertrouwen hebben dat hun aangekochte vlees wel degelijk halal is, zijn niet bereid om een meerprijs te betalen voor meer zekerheid omtrent de status van het vlees. Verder bleek ook dat certificatie van halal vlees in België slechts de helft van de consumenten zou kunnen overtuigen om in meer modernere aankoopplaatsen zoals supermarkten hun vlees te kopen. Dit geldt vooral voor hoog geacculturereerde en vrouwelijke consumenten waarschijnlijk omdat zij beter vertrouwd zijn met labels in de supermarkt en de voordelen die deze kunnen opleveren inzake informatievoorziening en kwaliteitsgarantie.

# SUMMARY

In consumer behaviour literature, there is general agreement that culture and religion are particular influences on the way consumers perceive and behave. Religion is, furthermore, one of the main factors determining food avoidance, taboos, and special regulation, in particular with regard to meat. In Islam, in addition to its five pillars[4], Muslims have to follow a set of dietary laws intended to advance their well-being. The consumption of alcohol, pork, blood, dead meat and meat which has not been slaughtered according to Islamic rulings are all prohibited. Halal (i.e. allowed for Muslims) as a product characteristic, refers to the nature, origin, and production method of food for Muslims. In this sense, it is comparable to organic, animal friendly or sustainable food.

Although the dietary laws imposed by religion can often be rather strict, the number of people following them is usually quite substantial. It has been estimated, for example, that 75% of Muslims in the US follow their religious dietary laws, indicating that even after having emigrated from predominantly Muslim cultures, a majority of Muslims still eat halal. Indeed, immigrants' food habits may change more slowly than other more visible aspects of culture such as language or clothing because many meals are eaten in the privacy of the home and food habits are unique and fundamental to most cultures.

Despite the growing potential of the halal market segment worldwide, and in Europe in particular, little scientific research has been conducted on food consumption among Muslim consumers and many questions remain unanswered. The role of religion in the halal meat consumption decision-making process is unclear. Is halal meat consumption essentially religiously inspired or are there other motivations? Because the empirical field of this study is Belgium, it is also necessary to consider the possible influence of acculturation on the decision-making process, since the Belgian Muslim community consists mainly of the children and grandchildren of immigrants. Are young Belgian Muslims still eating halal and if so, for what reasons? Halal is a typical credence characteristic which can neither be evaluated by the consumer upon purchase nor after consumption. This leads to quality uncertainty (is halal meat really halal?), which can be reduced by a certified halal meat label. Hence, this study also investigates the opinions of Belgian Muslim consumers as to who is best fit to control the halal meat chain in Belgium and confer such a label, and whether they are prepared to pay a premium price for this. Finally, the thesis investigates whether current consumer trends in meat consumption (convenience, health, need for information and safety) help to explain Muslim consumer preferences too.

In sum, the aim of this thesis is to research halal meat consumption behaviour among Muslim consumers living in Europe, mainly Belgium. The Total Food Quality Model is used as a framework (Brunsø, Fjord & Grunert, 2002) since it is considered the most adequate for studying consumer food choices.

[4] The five pillars in Islam are: shahada or confession of faith, salaat or prayer, ramadan or fast, zakaat or charity and hajj or pilgrimage.



A first paper (*chapter 2*) presents the way the meat chain is to be adjusted to Islamic conditions for halal meat production and retailing. An integrated quality assurance system based on HACCP-principles (Hazard Analysis Critical Control Points[5]) is needed to control the halal production standards and norms resulting in the halal meat status. This status can eventually be signalled to consumers by means of a label so as to reduce quality uncertainty at purchase. However, technical constraints, diverging opinions among stakeholders, lack of independent control mechanisms and lack of conclusive quantitative information on Muslim consumers' needs and interests are all retarding this evolution.

To meet the purpose of the thesis, five studies (two qualitative, three quantitative) were performed. Results from the second qualitative study (three focus groups in Belgium, the Netherlands and France) are only used to clarify the hypotheses review in the discussion chapter.

Results from the first qualitative study, reported in *chapter 3*, show that health, faith and respect for animal welfare are the main motivations for buying halal meat among Muslim consumers. The role of religion within a migration context in halal meat consumption decision-making in France (pilot study) and Belgium (2nd study) was explored using the Theory of Planned Behaviour[6] through 2 kwantitative studies, with special attention to self-identity (religion) and acculturation (migration context). The results of these studies are presented in *chapter 4* and show that in general among French Muslims, a positive personal attitude towards the consumption of halal meat, the influence of peers and the perceived control over consuming halal meat predict the intention to eat it. In Belgium, perceived lack of safety measures or lack of confidence in existing safety controls are shown to be potential barriers preventing Muslim consumers from eating halal meat which is especially influenced by a positive health attitude towards halal meat. Adding self-identity to assess the role of religion and acculturation within a migration context by splitting the group into consumers with low self-identity versus high self-identity and low acculturation versus high acculturation leads in both countries to different decision-making models in the four groups, with low self-identifying and highly acculturated Muslim consumers presenting the best performing models.

The following chapter (*chapter 5*) focuses on public trust of Belgian Muslims in information sources for halal meat and their confidence in key actors and institutions for monitoring and controlling the Belgian halal meat chain. Findings reveal that Islamic institutions and especially the Islamic butcher receive in general most confidence with regard to both the monitoring and controlling of the halal status of meat and even so for communicating about it. However, based on Muslims' confidence, four market segments were identified: Indifferent (29.1%), Concerned (9.7%), Confident (33.1%) and Islamic idealist (26.7%).

[5] HACCP refers to the analysis of critical control points in the food production process which should be monitored in order to reduce or eliminate potential food safety risks.

[6] The Theory of Planned Behaviour proposes that a behaviour intent is influenced by the attitude towards that behaviour (Attitude), the influence of social pressure that is perceived by the person (Subjective Norm), and the person's perception of how easy or difficult performing the behaviour will be (Perceived Behavioural Control).

Indifferent consumers are rather undecided about who should monitor the halal status of meat, and they are most open to purchasing halal meat in the supermarket. Concerned Muslim consumers display higher confidence in Belgian than Islamic institutions. These consumers also perceive barriers to purchase halal meat. Among these are, a perceived lack of information, poor hygiene and safety concerns. Confident consumers display a clear preference for Islamic institutions to monitor and communicate about halal. Islamic idealists, who are typically young, second generation Muslims with a high Muslim self-identity, differ from the confident consumers in their very low confidence in local Belgian actors and institutions.

Once a quality control mechanism is installed for the Belgian halal meat chain, consumer prices for halal meat may increase. Therefore, the last quantitative study investigates Muslims' willingness-to-pay for certified halal-labelled meat at the Islamic butcher and the supermarket and their intention to buy halal meat from the latter point of sale. Results (*chapter 6*) show that a lot more Muslim consumers are willing to pay a premium for certified halal-labelled meat at the Islamic butcher shop (62.9%) than in the supermarket (35.3%). The greater the importance attached to a halal label and the greater the distrust in actual halal meat status, the greater the likelihood a Muslim consumer will accept a higher price for halal labelled meat at the butcher shop. Furthermore, halal meat consumption frequency and age determine the actual premium which Muslim consumers are willing to pay. In the supermarket, willingness-to-pay is influenced by trust in the halal meat status, the expected benefits and generation. Nevertheless, results also show that current assurances about the halal status of meat are the most important motivation for a lack of willingness-to-pay a premium. It seems, furthermore, that certification of halal meat in Belgium would only persuade half of the Muslim population, mainly the more acculturated and female Muslim consumers, to purchase at 'modern' retail outlets. Possibly, being born in Belgium and being the main person responsible for food shopping in the household, these consumers are familiar with labelled foods in supermarkets and with the benefits which accompany labels (supplying information and quality reassurance).



# Chapter 1

# INTRODUCTION

# 1 General introduction

In recent times, media coverage of the halal market has increased tremendously. The global halal food market is pictured as a 'booming business' with almost 1.8 billion potential consumers, i.e. the estimated number of Muslims worldwide. For those consumers, food consumption is restricted by religious rules which go straight back to the holy texts, with meat being subject to the largest number of dietary prescriptions. Although this thesis focuses solely on fresh halal meat consumption, the halal food market comprises more than meat alone. Today, meat derivatives such as gelatine or enzymes and other food ingredients such as food additives or emulsifiers are subject to halal certification not only for food production but even for pharmaceuticals, cosmetics and dietary supplements. In some countries, Malaysia for example, Muslim consumers are even becoming concerned about contaminations from haram sources in products such as toileteries and medication (Fischer, 2008). Fischer defines this evolution as 'halalization': a major preoccupation with, and proliferation of, the concept of halal in a multitude of commodities which has incited debates about the bounderies and authenticity of halal purity versus haram impurity.

Shopping guides intended to help Muslim consumers to select acceptable food products in supermarkets are circulating on the internet, thereby simplifying the shopping task while providing convenience and relieving uncertainty related to the credibility of the purchased goods. Growing Muslim consumerism, which is clearly visible on the internet, is based on a more conscious halal consumer, especially among those living in predominantly non-Muslim countries. Muslim consumers, even second or third generation Belgians, are requesting their foods to be halal. Food marketing is taking advantage of the opportunities offered by this development and is increasingly launching new halal products designed for a changing Muslim consumer. This sector needs insights into halal meat consumption decision-making in order to adapt their marketing strategies to this potentially lucrative consumer segment, all the more so because religion-inspired food consumption is hypothesised to differ from conventional meat consumption.

The flipside of the coin related to halal meat consumption is the majority public opinion which considers ritual slaughter (which is basically equivalent for slaughter without stunning) to be cruel and animal unfriendly. The rite of Eid-el-kbir, by which every head of a Muslim family is supposed to slaughter a sheep, yearly leads to mediatised criticism from animal welfare organisations in Belgium which oppose religiously motivated slaughter without stunning. The debate mainly centres on whether the legal exemption from stunning before slaughter should be maintained for religious groups. In other countries, the UK for example, consumer organisations have entered the public debate on ritual slaughter in order to protect non-Muslim consumers' rights to a free food choice. In the aftermath of the BSE crisis and the resulting general consumer demand for transparency and traceability in the food chain, experts are now questioning whether consumers in general are to be protected from buying and consuming meat resulting from non-stunned animals (Islamic or Jewish slaughter) since a part of the religiously slaughtered animals is sold on the

conventional meat market. A traceability system for religious foods is therefore seen as desirable both for the religious and the general meat consumer.
Legally and philosophically, religious slaughter is caught between the fundamental right on freedom of religion on the one hand and legislation on animal welfare on the other hand. In the Islamic community, slaughter of animals in accordance with Islamic rites (without stunning) is perceived as the less painful and stressful method (Aidaros, 2005). In academic literature on animal welfare, however, several animal welfare issues during religious slaughter are mentionned such as stress of restraint, whether the cut is painful and whether the animal experiences undue distress whilst it is bleeding out (Gregory, 2005). Research has shown that animals slaughtered without stunning take a long time to lose brain function and die (Gregory, 2008; Gregory et al., 2008). Aditionally, studies demonstrated no significant difference in blood loss variables for meat slaughtered with or without stunning (Anil et al., 2006) hereby reassuring advocates of religious slaughter who claim that efficiency of bleed-out is adversely affected by stunning. With respect to meat quality, most meat scientists accept that meat quality from stunned and not stunned slaughtered animals is equal (Anil et al., 2006). In a recent study, however, 25 lambs slaughtered without stunning resulted in meat that developed less drip before cooking and had less cooking loss compared to meat from electrically or $co_2$ stunned lambs (Linares, Bórnez, Vergara, 2007).
Despite the opportunities offered by the specific halal market segment, scientific research into halal consumption is so far conspicuously lacking. Many actors in the food chain such as food producers, retailers, certifying agencies, food policy makers and communication experts could benefit from insights into halal (food) consumption decision-making.
This thesis, therefore, is designed to investigate halal meat consumption, especially among Belgian Muslims. The main focus is on the role of religion in a migration context, through religious self-identity and acculturation, on halal meat decision-making among Muslims in Belgium. Additionaly, both Muslim consumers' need for information and quality assurance through a halal label and their willingness-to-pay (WTP) a premium for this reassurance is studied. Throughout the five studies presented in this thesis, current meat consumption trends such as health, convenience, the need for information and quality reassurance in connection with halal meat consumption are a recurring concern. In short, the entire left side (before purchase) of the Total Food Quality Model (TFQM; Brunsø, Fjord & Grunert, 2002), a framework for analysing consumer food choice, is applied to halal meat consumption in order to gain insights into Muslim consumers' intention to consume halal (labelled) meat.
This introductory chapter first presents a literature review relevant to halal meat consumption. This review covers the impact of religion in a migration context on meat consumption, the definition of halal as a credence characteristic, and relevant contemporary consumer meat trends. Next, the conceptual framework for the thesis, its research objectives and hypotheses are set forth. This first chapter concludes with a thesis outline.
Preceding the literature review, the following section focuses on Islam's place in Belgian society. It presents demographic data on Muslims, the institutionalisation of Islam and the importance of ritual slaughter in Belgium.



## 1.1 Islam in Belgium

In contrast to France, Belgium has no colonial past with Islam and it was only in the sixties that Belgian society was confronted with Muslims, when large numbers of Muslim migrants, in particular from Morocco and Turkey, immigrated. In 2004, an estimated 400,000 Muslims lived in Belgium, equating to 4% of the Belgian population. More than half of them are concentrated in the Brussels' region, where they make up 17% of the population (Manço & Kanmaz, 2004). The other half is distributed equally between Wallonia and Flanders. Moroccans constitute the largest Muslim community (estimated at 225,000 in 1998), Turks the second largest (126,000 in 1998), the remainder being largely others of diverse heritage (De Ley, 2005).
In 1974, Belgium was the first West-European country to legally recognise Islam, making it theoretically equal to the other recognised religions in the country, the practical consequences of which involve the appointment of Islamic teachers in state schools, the appointment of imams in prisons and provision for Islamic sites in two cemeteries. 1974 was also the year in which the Belgian government imposed a freeze on immigration. The continued growth of the Muslim community during the rest of that decade and the following one was the result of family reunification, as migrant men brought their families over to Belgium. This evolution required housing, schooling, mosques, shops and so on, as a result of which Muslims became increasingly visible in Belgian society. In reaction, extremist political parties using migration as a central theme were established. Several events in the 1980s led to a general public and political debate on Islam's place within Belgian society and the Belgian government started to take interest in the organisation of Islam in the country. In the same period, a first integration policy was founded based on a report referring to the migration issue as a problem with Islam: migrates where defined as Muslims. Since then, the institutionalisation of Islam has been not only a matter of recognition but also of governmental control which is clearly expressed through the establishment and functioning of the Muslim Executive of Belgium (EMB). In 1994, a temporary EMB was founded with 17 members. Four years later, elections took place, leading in 1999 to a definitive recognition by the Belgian government of the EMB as an official Islamic institution. However, among other reasons, internal conflicts and lack of governmental provision have delayed the EMB's working and several policies still need to be implemented, one of which is the introduction of a halal label.
Notwithstanding the lack of institutionalised control of the halal meat chain, Belgium, together with France, is West-European's leader in ritual slaughter (i.e. slaughter without stunning). About 21% of all calves slaughtered in the country are ritually slaughtered, as are 10% of cows, 40% of all lambs and 92% of all sheep (FCEC, 2007). The FCEC[7] report (2007) presents especially economic reasons rather than religious demand as the explanation for a growing European practice of ritual slaughter. Increased export to third

[7] FCEC is the abbreviation of Food Chain Evaluation Consortium, which conducted a study of stunning/ killing practices in European slaughterhouses and their economic, social and environmental consequences.

world countries and product efficiency, using one slaughter line instead of two, are pushing Belgian and French slaughterhouses to perform more and more ritual slaughter. An additional incentive for Belgian abattoirs in particular is the relatively hands-off Belgian policy towards ritual slaughter in comparison with other European countries, where the conditions and/or manner of ritual slaughter are more strictly regulated. As a result, in Belgium, the number of ritually slaughtered animals exceeds internal Muslim demand for this meat, which is then exported or sold on the conventional meat market (Peeters, 2007).

## 1.2 Religion in a migration context: impact on meat consumption

This section discusses the role of religion in food consumption decisions, more specifically meat consumption among Muslim consumers in Europe. Being mostly migrants or descendants of migrants, it is possible that the food habits of these consumers could change after several years in the host country. Therefore, we engage with the debate on acculturation in general and food acculturation in particular. Finally, we provide insights into the international halal food markets, which is said to be among the fastest growing food market in the world.

### *1.2.1 Religious motives and meat consumption*

As societies become increasingly multicultural, ethnicity and culture are important influences on the development of marketing strategies (Sekhon & Szmigin, 2005). Marketing practitioners have stressed that understanding culture is very important when attempting to market to ethnic groups (Gore, 1998). Vankatesh (1995) notes confusion in the consumer behaviour field that results from observing behaviour at the individual level rather than its interaction within a socio-cultural environment. Individuals are products of their culture and their social groupings and are conditioned by their socio-cultural environment to act in certain ways. The author introduces ethno-consumerism as a viewpoint on consumers which looks at the individual not just as an individual (his or her personality, cognition, and mental constructs) but as a cultural being, as a part of a culture, subculture, and other group affiliations (his or her value system, symbolic belief systems, rituals and everyday practices). In this thesis, the study of halal meat consumption as a regular practice in Islam, set within a predominantly non-Muslim country like Belgium is central.

There is general agreement in consumer behaviour literature that culture, including various aspects of social life from religion to everyday practices, greatly influences the way consumers perceive and behave (Ogden, Ogden & Shau, 2004). More specifically, religion influences consumer attitudes and behaviour in general (Delener, 1994; Pettinger, Holdsworth & Gerber, 2004), and food purchasing decisions and eating habits in particular (Mennell, Murcott & van Oosterloo, 1992; Steenkamp, 1993; Steptoe & Pollard, 1995;



Shatenstein & Ghadirian, 1997; Asp, 1999; Mullen, Williams & Hunt, 2000; Blackwell, Miniard & Engel, 2001). In many societies, religion plays one of the most influential roles in food choice (Dindyal, 2003; Musaiger, 1993) especially by prohibiting or allowing certain foods. That is why the role of religion in meat consumption among Belgian Muslim consumers is studied here.

Defining religion seems to be a very difficult task because it is one of those concepts that do not refer to things possessing a single defining characteristic (Harrison, 2006). According to Pargament (2002), religion is a search for significance in ways related to the sacred. When the sacred is integrated into an individual's life, a transformation takes place: beliefs become theologies, behaviours become rituals, relationships become congregations, and feelings become religious expressions. Religion may also be considered a sub-class of culture, a viewpoint which considers the cultural influence on religious expression. In this anthropological viewpoint, religion is defined as an institution consisting of culturally patterned interaction with (a) culturally postulated superhuman being(s) (Spiro, 1973). Halal meat consumption can be seen as ritual behaviour or a religious expression which is religiously and culturally formed. Meat in general seems to be a medium rich in social meaning because of its association with cultural habits and rituals, both religious and secular (Fiddes, 1992). Religion is one of the main factors determining food avoidance, taboos, and special regulation, in particular with respect to meat (Simoons, 1994). Several religions impose food restrictions. Examples are the prohibition against pork and not ritually slaughtered meat in Judaism and Islam, and against pork and beef in Hinduism and Buddhism. Of the 'world religions', only Christianity has no food taboos (Sack, 2000). These prohibitions derive from human cultures. Many were established for health, food safety or unknown reasons in the past, and have since gained further support from religious sanctions. Religious food proscriptions are far easier to adopt than to discard because once a ban has been adopted it tends to be reinforced by strong feelings of disgust, as in the strong aversion felt by Jews and Muslims to pork in general (Simoons, 1994).

In addition to the five pillars of Islam[8], Muslims should follow a set of dietary laws intended to advance their well-being. These dietary laws determine which foods are halal (i.e. permitted) for Muslims and which are proscribed, the latter being alcohol, pork, blood, dead meat and meat which has not been slaughtered according to Islamic rulings. Chapter 2 of this thesis presents the specific dietary rules of Islam in more detail.

Although the dietary laws imposed by religion can often be rather strict, the number of people following them is usually quite substantial. It has been estimated, for example, that 75% of Muslims in the US follow their religious dietary laws, indicating that even after having emigrated from predominantly Muslim cultures, a majority of Muslims still eat halal (Hussaini, 1993). As this source offers the only available data on halal consumption in general, it can serve as a basis for estimating the European halal food market. If we extrapolate this percentage to Muslims in Europe, it yields a potential halal food market of about 10 million European consumers. Factors explaining differences in adherence to

[8] The five pillars of Islam are: Shahadah or profession of faith, Salah or ritual prayer, Zakah or alms tax, Sawm or fasting during Ramadan, and Hajj or pilgrimage to Mecca.

religious dietary laws pertain, among others, to origin, immigration, and generation differences (Limage, 2000; Bergeaud-Blackler, 2001; Saint-Blancat, 2004; Ababou, 2005). These are the possible determinants of halal meat consumption studied in this research.
In sum, the literature has shown that religion can influence food consumption by prescribing and proscribing certain foods and food practices for their followers. Most Muslims seem to abide by these religious laws. However, in Europe, Muslims are mainly immigrants or their descendants; hence, the question arises as to whether they maintain their food habits or adapt their food choices to their new food and cultural environment. This leads us to a literature review on acculturation.

### *1.2.2 Role of acculturation*

From an anthropological viewpoint, acculturation in general is regarded as the result of continuous first-hand contact between groups of individuals from different cultures, this being adaptation in the original culture patterns of either or both groups (Redfield, Linton & Herskovits, 1936). The term psychological acculturation, on the other hand, recognises that this phenomenon involves not only group changes (ecological, cultural, social, institutional, etc.) but also changes in individuals, who will display changes in attitudes, conduct, way of life, identity and so on. Berry (1990: 460) defines psychological acculturation as the changes that an individual experiences as a result of being in contact with other cultures and as a result of participating in the process of acculturation that one's cultural or ethnic group is undergoing. In general, acculturation denotes the process by which an immigrant racial or ethnic group, usually a minority, adopts the cultural patterns, for example beliefs, religion, diets and language, of the host culture (Jamal, 1996; Laroche, Kim & Tomiuk, 1999). The concept of acculturation thus contributes to the explanation of how people react to exposure to new socio-cultural environments (Rogler, Cortes & Malgady, 1991). Consumer acculturation, being specific to the consumption process, is seen as the process by which an immigrant consumer learns and adopts the behaviours, attitudes and values of a culture different from his/her culture of origin (Lee, 1988). The degree of acculturation influences sub-cultural purchase decisions, especially for value expressive products, i.e. products carrying highly symbolic attributes and which are subject to the social and psychological interpretation of the buyer (Ogden et al., 2004). It is hypothesised here that religion inspired foods such as halal meat are examples of such products. Since we focus on the role of religion in food consumption behaviour, we adhere to the abovementioned general definition of acculturation, so that changes in food habits and religious practices are seen as dimensions of acculturation.
Some studies have focused on the acculturation process of Muslim immigrants in general. For example, Stodolska and Livengood (2006) found that incentives to preserve traditions such as dress, diet, and leisure styles among Muslim minorities are strong enough to counteract pressure from the out-group since these customs have strong spiritual underpinnings in addition to cultural roots. In addition, the authors posit that assimilation



among ethno-religious minorities is slower than among ethnic groups defined by their national origin. Sekhon and Szmigin (2005) showed that even second generation immigrants (Asian Indians in Britain) are still integrating into the dominant culture rather than being assimilated into it since they have the desire to stay loyal to the older generation, the home country and even 'eastern' values. These findings are partly confirmed by a Dutch study (Stevens, Pels, Vollebergh & Crijnen, 2004) which found that adolescent acculturation patterns were characterised by a higher attachment to the Dutch but an attachment to Moroccans that about equals that of their parents resulting in higher attachment to the Dutch culture without necessarily meaning a loss of attachment to Moroccan culture. They furthermore found no clear assimilation class; that is, one whose members are not at all attached to Moroccan culture. They conclude that Moroccans in the Netherlands remain, at least to some extent, attached to their own group and culture. Berry (2003) defines this attitude towards acculturation as integration and observes that this desire to maintain and develop their cultural heritage and identity while participating fully in the institutions and daily life of the host society is the preferred mode of acculturation for minority groups. In general, Faragallah, Schumm and Webb (1997) suggest that many Arabs (especially Muslim Arabs) in the US find acculturation to be more difficult than other immigrants.
With respect to religion, one of the dimensions of acculturation, Navas, Rojas, Garcia and Pumares (2007) found that Maghrebi immigrants prefer to maintain their original customs and not adopt Spanish customs in their family relations, in their religious beliefs and customs and in their ways of thinking (principles and values). Moreover, in a migration context, religion can become an important marker of identity and a significant instrument for self-categorisation and, therefore, can not only help immigrants to find an identity (Burton, 2004) but can also provide them with something to hold on to amid an overwhelming flow of changing processes (Dumont, 2003). An American study (Pew Research Center, 2007) showed that nearly half of Muslims say they think of themselves as a Muslim 'first', while 28% say they think of themselves as an American 'first'. Muslims in Western Europe, however, are generally much more likely to think of themselves primarily as Muslims, rather than as citizens of their countries. The study, furthermore, found a relationship between religious identity and religious commitment (measured through mosque attendance) which seems especially significant for younger Muslims. Nevertheless, De Ley (2005) does not agree with this statement and posits that religious, and more concrete Islamic self-identification does not relate to effective religious practices. With respect to religiosity, the Pew Research Center study (2007) found that almost half of Muslims in the US think that American Muslims are not changing very much in terms of their religiosity, 31% even declare that they are becoming more religious. Halal meat consumption could be considered a manner to express this religion inspired identity among minorities. "As with national groups, religious groups derive their distinct identity in part from special food ways" (Sarri, Higgins & Kafatos, 2006: 7).
Food habits may be influenced directly by cultural factors independent of exposure to the host culture or changes in psychosocial and environmental factors (Satia-Abouta, Patterson, Neuhouser & Elder, 2002; Verbeke & López, 2005). Nevertheless, immigrants' food habits may change more slowly than other more visible aspects of culture such as

language or clothing because many meals are eaten in the privacy of one's home and food habits are unique and fundamental to most cultures (Park, Paik, Skinner, Ok & Spindler, 2003). Food attitudes are formed early in childhood and are reinforced by a variety of familial, social, and cultural influences, which makes food habits one of the most resilient of all habits in acculturation contexts (Rozin, 1990; Rozin & Schiller, 1980). Levenstein (1985) argues that immigrants and ethnic minorities try to maintain their own cooking and eating habits as long as possible, even against strong pressure to change them. However, some foods or ingredients may not be available in the new environment. For instance, the Jewish dietary laws were the first to be abandoned by Jewish immigrants in urban neighbourhoods of North America as communal pressure faded away and, even for those wanting to observe them, the limited availability of kosher foods rendered kosher food consumption very difficult (Diamond, 2000).

This literature review on acculturation indicates that Muslim Moroccan migrants may prefer to maintain those aspects of their home culture which seem important to them or which are deeply rooted in their culture such as religious beliefs and food habits. In a migration context, religion may even become an identity maker with food consumption as an expression of this identity.

In the studies in this thesis we focus on behaviours as an instrument to measure acculturation (Stevens et al., 2004) including items about language use, social contacts, media use and food habits and preferences; and religious instead of ethnic identification (self-identification with Islam). As such we investigate the role of Islam, in a migration context, in meat consumption decision-making.

### *1.2.3 International halal food market*

The Canadian International Markets Bureau (2001) reported an international halal food trade of 150 billion dollar per year for about 1.8 billion Muslims worldwide which would grow to 500 billion dollar by 2010 (Ziegler, 2007). According to Christine Weaver, exhibition director for Halal World Expo, the halal food market currently accounts for 12% of global trade in food products and should easily account for 20% by 2025 with a projected Muslim population of 30% of the world's population by that year (www.middleeastevents.com/site/pres.dtls.asp?pid=2597). The total spending power of Muslims in the US was estimated at 12 billion dollar in 1999, of which around 3 billion dollar was spent on meat (Riaz, 1999). Although to the awareness of the authors, there has been no estimate for the halal trade and market volume in the EU, the potential market size expressed in terms of the Muslim population - estimated between 13 and 18 million individuals before the enlargement from EU-15 to EU-25 - is substantial (Buijs & Rath, 2006; BBC News, 2005). With enlargement, the EU Muslim population has grown more than 140% over the past decade to reach 25 million (Mena Report, 2007). The United Kingdom would have a market potential of 4 billion dollar for halal foods (Ziegler, 2007). As noted above, about 75% of Muslims follow their dietary rules in the US. Assuming that this percentage can be applied to Muslims in Europe, this would yield a potential halal food market of 10-18 million consumers (depending on the



Muslim population estimates). In Belgium, which is the main focus in our studies, there are approximately 400,000 Muslims, of mainly North Africa and Turkish ethnic origin, who account for 4% of the Belgian population (Bousetta & Maréchal, 2004). France, being the West-European country with the largest Muslim population, with mainly North African roots, accounts for an estimated 4-5 million Muslims (Haut conseil à l'intégration, 2000; Dasetto, 2001). In the Netherlands, it is estimated there are almost 1 million Muslims, of mainly Turkish and Moroccan ethnic origin (Phalet & ter Wal, 2004).

Although the halal markets in North America and the United Kingdom have been the subject of a number of studies, research on continental European Muslims' food choice in general and meat consumption in particular is extremely rare. The results of a household panel survey in the Netherlands (Foquz, 1998) showed that Muslims are heavy meat consumers. The average meat consumption per capita in the Netherlands was 35.6 kg in 1998. Ethnic Turkish consumers, however, ate on average 61.3 kg meat per year and ethnic Moroccan consumers 57.1 kg per year. In the UK, Muslims represent about 5% of the UK population but they consume arround 20% of British lamb and mutton (Allam, 2008). The total spending power of Muslims in the US was estimated at $12 billion in 1999, of which $3 billion went on meat and poultry (Riaz, 1999). The global halal market for foods has been estimated at 1.5 billion consumers (Riaz & Chaudry, 2004: 31) and more recently at 1.8 billion consumers (Ziegler, 2007) which means that one in four consumers worldwide buys halal products.[9] Until recently, the food industry has largely ignored the specific Muslim market segment. In contrast to the well-developed kosher market (on average 30% to 40% of grocery items in US supermarkets are kosher) (Hunter, 1997), halal food products on the shelves of European supermarkets in particular are rather scarce, albeit differing in amount from country to country and city to city. In the past, Muslim minorities simply avoided foods that did not meet their dietary standards or bought kosher foods when available. Nowadays, Muslims are making their presence felt socially and politically and are requesting halal certified food products (Riaz & Chaudry, 2004; Shafie & Othman, 2006). Hence, a significant positive development of the halal foods market in favour of Muslim consumers has been observed since the beginning of this thesis (2003), with France leading the way in the EU (Ziegler, 2007). An example is the opening in 2005 of the first French halal fast food restaurant, Beurger King Muslim, targeting young Muslims desiring halal convenience foods.[10] It differentiates itself from other ethnic, halal restaurants by publicly confirming its Islamic identity and thereby responds to the rise of a strong Islamic attitude among young Muslims expressed by consuming halal foods and wearing Islamic inspired clothing (Bergeaud-Blackler, 2006).

Leading retailers such as Carrefour in France and Belgium and Albert Heijn in the Netherlands are running trials of halal meat in their product range. Previous attempts of this kind in retail environments were often unsuccessful because of a lack of insight into the food purchasing and consumption behaviour of Muslims (Ramdani, 2005), and also

[9] The non-Muslims living in Muslim countries who are thus consuming halal foods explain the difference in the total number of Muslims and the total number of halal consumers.

[10] A young Muslim with migrant North African parents is often called a "beur" in France.

because of uncertainty with respect to the specification and labelling of halal (Bonne & Verbeke, 2008a). Fundamental problems that arise are divergent definitions of halal meat and the different quality certification schemes. These problems are expected to soon become important food policy issues that are likely to make their way onto the regulatory and policy agendas in many European countries (Bergeaud-Blackler, 2004). In Belgium for instance, the legal exemption on stunning before slaughter for religious purposes is nowadays discussed at policy level.

Given the fact that the halal food and meat markets are emerging, and both offering opportunities and posing threats, gaining better insight into halal food and meat consumer behaviour has become of interest to several stakeholders in the food chain, including food policy makers, food producers, certifying organisations and retailers.

## 1.3 Halal as a credence quality attribute

Halal is a typical credence quality attribute; that is, a product characteristic that cannot be evaluated or ascertained by the individual consumer, even upon or after consumption (Darby & Karni, 1973; Grunert, 2005). Credence goods are an extension of the economics of information approach (Nelson, 1970, 1974), which distinguishes between search goods, whose quality can be evaluated before purchase (e.g. price), and experience goods, whose quality can be evaluated only after purchase (e.g. taste). For credence characteristics, however, consumers have never, not even after purchase, the possibility of finding out whether the product actually possesses the claimed characteristics due to a lack of tracing possibilities or their prohibitive costs. They are thus a matter of trust, and today such characteristics are becoming more important to consumers (Andersen, 1994). Olson and Jacoby (1972) distinguish intrinsic product attributes, which refer to the attributes of the physical product (e.g. colour) and extrinsic product attributes, which refer to everything else (e.g. price). The latter set is mainly used when intrinsic attributes are difficult to assess for consumers, i.e. in those choice situations which are characterised by a predominance of experience and / or credence characteristics.

Both abovementioned approaches are multi-attribute ones, starting from quality as a multi-dimensional phenomenon defined by a set of consumer perceived characteristics or attributes. The consumer then forms an overall one dimensional quality evaluation by weighing the various attributes. The main quality dimensions are sensory quality, healthiness, convenience and process characteristics (Grunert, 2006). At the point of purchase, these qualities are mainly unknown to the consumer, who can only infer them from the available information, called quality cues or indicators. In the past, consumers traditionally based their quality perception of meat on intrinsic cues like colour, visible fat or the cut, mainly because only limited extrinsic quality cues for meat were available. The current opinion is that the use of extrinsic cues for quality inference is and will be increasing (Bernués, Oolaizola & Corcoran, 2003). Today's consumers are attaching more and more importance to health and safety related issues and to process characteristics related to



health and safety. Health and safety are credence attributes which are difficult to infer from intrinsic cues, so interest in health and safety issues may fuel an increased use of extrinsic quality cues (Grunert, 2006). This is hypothesised to be the case for the halal attribute of fresh meat through labelling as an extrinsic quality cue of the halal status of meat.

A credence quality characteristic of a product may be 'hidden' in different ways. One of these involves the probability that the characteristic will never be revealed since it is related to the production process rather than to the physical product. This is the case for the halal attribute. The buyer has to take the seller's word rather than experiencing the quality attribute, as is the case with attributes such as 'organic', 'hand-made', 'made in Italy' and 'free range'. These production-process-oriented specifications are especially widespread with respect to food products, halal and kosher foods being age-old examples (Andersen, 1994).

The presence of the credence quality has to be clearly communicated, for example through an indication on-pack or on-label. Furthermore, in order to have some utility value to the consumer and to be useful for purchasing decision-making, the communication source and message conveyed with respect to the credence quality have to be trustworthy and believable (Verbeke, 2005). Credence characteristics are thus a matter of trust in the sources providing the information and confidence in the key actors and institutions managing the risk. Trust can be defined as "the extent to which one believes that others will not act to exploit one's vulnerability" (Morrow, Hansen & Person, 2004). However, it is difficult to provide a single definition of trust and its interpretation is often confused with confidence. In general, trust refers to interpersonal relations, whereas confidence relates rather to institutional relations (Weber & Carter, 1998). Trust is mainly about whether the information source is perceived to be conveying information in an open and transparent way, whereas confidence rather refers to the perceived competence of the information source or institution to perform a particular task such as information provision, monitoring or controlling. Under certain circumstances, institutions both manage and communicate the hazard. However, some actors, for example friends and family, only serve as potential information sources.

In communication in general, and risk communication in particular, source credibility emerges as an important factor. Furthermore, trust in information sources is unlikely to be very influential with regard to potential hazards where people already hold very extreme attitudes about the particular hazard (Frewer, Howard & Shepherd, 1998), which is assumed to be the case for religiously driven consumption of halal meat. In such circumstances, people are more likely to assess the information, to see if it aligns with their attitudes and if not, to change their opinion about the information source rather than change their attitudes towards the product or behaviour. With respect to institutional confidence, this seems to be influenced by perceptions of institutional characteristics such as knowledge, accuracy, concern for public welfare (Frewer, Howard, Hedderley & Shepherd, 1996), competence, honesty (Frewer, 2000) and trustworthiness (Meijboom, Visak & Brom, 2006).

The way in which people respond to different risks is socio-culturally and individually constructed: what is acceptable for one demographic or cultural group may not be acceptable for another. Different groups within the same society understand and respond to

risks differently (Shaw, 2003), correlating with regional, ethnic, socio-economic and gender variables (Frewer, 2000). Furthermore, a person's religious upbringing can play an important role in trust formation (Huffman, Rousu, Shogren & Tegene, 2002). Social capital theory holds that individuals who are closer in social status or who have similar personal capital are more likely to trust one another (Glaeser, Laibson, Scheinkman & Soutter, 2000). For example, individuals who were raised in a particular religious tradition place more trust in others that were raised within the same religious tradition.

For Muslim consumers, trust in halal meat relates to certainty about the process attributes (i.e. meat processing and handling leading to the halal status) and safety in terms of meat wholesomeness. Mass media and word-of-mouth communication about possible frauds involving halal meat are detrimental to the general trust in halal meat. In addition, lack of institutionalised trust can fuel consumers' quality uncertainty and increase the perceived risk of consuming meat that is not really halal.

As noted above, consumers need to be informed about the presence of credence characteristics through an indication on-pack or on-label. Muslim consumers are requesting a halal label (Bergeaud-Blackler, 2004a) informing and assuring them about the status and the wholesomeness of halal meat, especially those second or third generation Muslims who are breaking with the shopping habits of their parents (Bergeaud-Blackler, 2006). Demand for more information through a label is especially strong among consumers concerned with safety and nutrition or health issues (Bernués et al., 2003). Labelling can transform experience and credence attributes into search attributes. A trusted halal label quality label could thus signal experience and credence attributes of halal meat and become a search attribute when purchasing halal meat at the butcher's or in the supermarket. Therefore, implementation of a quality assurance scheme is a prerequisite so that stakeholders involved in the meat chain can both claim and trust that halal meat fulfils the defined quality requirements and a halal label can serve as a quality reassurance information tool to consumers. The focus of quality assurance schemes has changed over time from management tools to assure food safety into more comprehensive approaches allowing assurances and safeguarding with respect to process standards relating, for example, to animal welfare and certified production methods such as organic or halal (Wood, Holder & Main, 1998; Fearne, Hornibrook & Dedman, 2001; Juska, Garveira, Gabriel & Stanley, 2003; Ten Eyck, Thede, Bode & Bourquin, 2006). However, a certification strategy could ultimately generate consumer price increases. Some consumers will be willing to pay higher prices for labelled meat to reassure safety but others will trade off price against the safety improvement (Angulo & Gil, 2007). Both Muslim consumers' potential demand for quality assurance through labelling and their willingness to pay for this reassurance are research topics within this thesis.



## 1.4 Contemporary meat consumer trends and halal meat consumption

The way people in general eat is changing. At the same time, meat remains a central element in their eating, so that the role of meat is prominent in the discussion and reporting of food trends (Grunert, 2006). General food consumer trends include a growing interest in food safety, health, naturalness, pleasure, convenience, information and ethical issues like sustainability and animal or environmental friendliness. In the specific case of fresh meat, safety guarantees, quality reassurance and trustworthy information, as well as interest in animal welfare and convenience, prevail as the most relevant consumer trends (Devine, 2003; Verbeke & Vackier, 2004). In this section we discuss whether these meat consumer trends could possibly matter significantly for halal meat consumers in Europe.

### *1.4.1 Meat safety and health*

Nowadays, health is a quality dimension that has become very important to many consumers motivated by expectations of both a longer life and one of higher quality (Roininen, Tuorila, Zandstra, de Graaf & Vehkalahti, 2001). Health-oriented food quality is defined as how consumers perceive a food product to affect their health (eating healthily) and thus includes functional qualities of foods but also safety and risk-related issues (avoiding unhealthy foods) (Brunsø, Fjord & Grunert, 2002). In recent years, consumers have become generally uncertain about the safety and quality of their food despite the fact that the food supply has never been safer and better controlled (Verbeke, Frewer, Scholderer & De Brabander, 2007). Food safety, which influences especially the image of meat, includes diverse phenomena such as BSE, pesticide residues in food, salmonella, dioxin, hormone and veterinary drug residues, and risks arising from novel production methods like genetic modification (Verbeke, 2001; Brunsø et al., 2002). It has increasingly become a matter of public interest since the BSE crisis and has had a substantial negative effect on overall meat consumption (Krystallis & Arvanitoyannis, 2006). Studies related to the consumer's judgement process with respect to food safety at the point of purchase have shown the necessity for an adequate information provision (i.e. use of quality labels, brands, etc.) as a means of assessing consumer food safety (Henson & Northen, 2000; Angulo & Gil, 2004; Mahon & Cowan, 2004). Even for the food industry, the search for products of better quality, where information plays a fundamental role in guaranteeing a certain quality and food safety, has become one of the main strategic priorities (Gellynck, Verbeke & Vermeire, 2006).

To our knowledge, there are no specific studies indicating differences in meat safety and healthiness concern depending on religion. However, Cohen, Schwartz, Antonovski & Saguy (2002) found that although there is no evidence to support the notion that kosher foods in general are safer, consumers still adhere to their belief that kosher products are safer than their non-kosher counterparts. A specific issue that has been investigated pertains to the acceptance of biotechnology in animal and meat production by Muslims. Zogby International conducted a poll among Protestants, Catholics, Jewish and Muslims

aged 18 or older called "Genetically modifying food: playing God or doing God's work?" (The Pew Initiative on Food and Biotechnology, 2001). The results showed that 46% of Muslims are somewhat to strongly opposed to biotechnology, 32% are somewhat to strongly in favour and 22% are not sure about biotechnology. Muslims have the lowest share of those favouring biotechnology, and the highest share of unsure consumers, when compared with followers of other religions. The majority of Muslims (61%) support the statement that humans have been empowered by God to use such knowledge to improve the life of humans everywhere. In addition, half of them feel that humans have the obligation to improve the world. Subrahmanyan and Cheng's (2000) research on the perceptions and attitudes of Singaporeans toward genetically modified foods also showed that especially Muslims and Christians had higher ethical concerns than Hindus and people who don not adhere a particular religion. However, the question as towhether genetic modification equals changing God's creations continues to be debated (Comstock, 2000). The Quran clearly proscribes changing God's creations: "Then set your face upright for religion in the right state-- the nature made by Allah in which He has made men; there is no altering of Allah's creation; that is the right religion, but most people do not know" (The Quran, chapter 30, verse 30).

### *1.4.2 Animal welfare*

Although numerous studies have shown that at least some consumers have concerns about meat production (animal welfare, feed, use of medicines, hormones, environmental effects, etc.), these attitudes are not strongly related to their purchase behaviour, as mirrored in the low market shares of, for example, organic and free range meat (Grunert, 2006). More specifically, most European consumers do not take animal welfare considerations into account when buying foods (European Commission, 2007). Other authors, however, suggest that consumer concerns about animal welfare contribute to the explanation for decreasing meat consumption in recent times (Verbeke & Viaene, 2000; Lea & Worsley, 2003; Phan-Huy & Fawaz, 2003). Having a positive attitude towards animal welfare thus not necessarily implies that consumers will buy a product positioned as an animal welfare product, but it does imply that such product attributes will enter the trade-off among different buying criteria (Grunert, 2006). This is an opinion shared by Caswell and Joseph (2006), who propose that environmental friendliness may not be a dominant driver in consumers' choice of a product but an additional and secondary consideration. Other explanations given are poor consumer knowledge of animal welfare (Miele & Evans, 2005), the difficulty for consumers to identify animal friendly products (European Commission, 2005) and the lack of availability of animal friendly products (Kjaernes, Lavik & Kjoerstad, 2005).
To our knowledge, no academic literature has reported on animal welfare concerns and its impact on meat consumption among Muslim consumers in Europe. However, animal welfare during ritual slaughter is the subject of heated public debate in most European countries (Bergeaud-Blackler, 2007). In spite of the Islamic prescriptions on humane handling of animals (see chapter 2 for more details on Islamic prescriptions concerning



animal welfare), most non-Muslims perceive ritual slaughter as being cruel, animal unfriendly and non-ethical. In general, ritual slaughter (Islamic and Jewish) without stunning is strongly condemned by animal welfare organisations in particular and the public opinion in general. In France and Belgium, criticism is principally expressed during the annual Eid-al-Kbir, when every Muslim family has to sacrifice a sheep (Bergeaud-Blackler, 2007). Opponents believe that since the head of the family (who has to do the slaughtering) is not a trained slaughterer, sheep can suffer from slaughtering methods which could be in conflict with the prescriptions. Home slaughter during this day is also heavily debated, since no veterinary control can be performed and neighbours complain about the smell and slaughter waste. Nowadays, in most European countries, sacrifice during Eid-al-Kbir is performed in an abattoir or in a temporary slaughter place by professional Islamic slaughterers (Brisebarre, 2003).

### *1.4.3 Convenience*

The importance of convenience in food shopping, cooking and eating continues to increase. A GfK and Ernst & Young study projects that, whereas nowadays in the Netherlands 60% of meals are consumed at home and 40% out-of-home, within 5 years the ratio will be 50/50 (GfK and Cap Gemini Ernst & Young, 2002). Convenience relates to any savings of time, physical energy, or mental energy that occurs during one or more of the phases of the home food production chain. These phases comprise deciding what to eat, purchasing, preparation, consumption and cleaning up and thus involve more than only ready-made meals (Grunert, 2006). The main determinants for the consumption of convenience foods are increased female participation in the workforce, general economic growth and increased wealth, the increase in double income households, increased single-person and small households, changed consumer values (such as greater weight given to individualism and self-fulfilment), a decline in cooking knowledge and new cooking technologies (Larson, 1998; Verlegh & Candel, 1999; Blaylock, Smallwood, Kassel, Variyam & Aldrich, 1999; Senauer, 2001; Grunert, Bredahl & Brunsø, 2003; de Boer, McCarthy, Cowan & Ryan, 2004). Sholderer and Grunert (2005) add that convenience orientations act as a mediator between perceived resources (in terms of disposable time and money) and convenience-oriented behaviour (like buying convenience foods).
The increasing demand for convenience foods is an important Western consumer trend. An interesting issue is whether this trend applies also to Muslim consumers living in Western societies. A Dutch study on family patterns, both within ethnic and native Dutch populations, notes that ethnic groups from Muslim countries such as Morocco and Turkey are strongly oriented to family and collectivity and have rather traditional family patterns [11] when

[11] The study showed that groups originating from countries with an Islamic tradition (Morocco, Turkey, Pakistan, Afghanistan and Iraq) can be characterized by traditional demographic behaviour strongly focused on the group. This specific demographic behaviour is described as comprising: a high number of children, a young marital age of women, a low

compared to cultures that focus on the individual (De Valk, Liefbroer & Esveldt, 2001). This finding would suggest that convenience orientation is less prevalent among the Muslim population. However, it should be noted that these authors conducted research only among immigrants; the second generation members of ethnic groups can be assumed to lean more towards the dominant Dutch culture, which is defined as more 'modern' and individually oriented in the abovementioned study. Badloe (Donkers, 1999), founder of 'Imamin' halal prepared meals, confirms that immigrants in the Netherlands mainly eat at home, in contrast to the second generation, which is seeking convenience and eats out more. Since these 'modern' Muslims from the second generation still follow Islamic dietary laws, halal convenience meals could meet their demand for halal convenience food. According to Riaz (1999), the increasing demand for convenience foods does indeed stretches to halal foods. Institutions like schools, hospitals, retirement homes, prisons and airline catering companies are asking for halal prepared meals for specific religious customers. Jackson (2000) claims that these meals are much more subject to scrutiny and criticism within the community and therefore choices should be made about production practices, suppliers, religious supervisory organisation and labelling. In the US, 'My Own Meals Inc.' and 'J&M Co' has met the small niche demand of the US military for strict religious meals. They have expanded their range to general consumer products with the introduction of several halal convenience brands (such as 'Imamin', 'My Own Meals Inc', 'J&M Co', 'Tolofood', 'Wouti', 'Tahira') in the food retail market. Even in Europe, the availability of halal convenience foods has improved since this thesis was first embarked upon (2003), the abovementioned Beurger King restaurant in France serving as a good example of how a fast food restaurant can adapt to the increasingly strong demand for convenience halal foods.

Nevertheless, convenience in shopping for halal food remains a major weakness in the halal meat chain in most European countries, with some exceptions (Bonne & Verbeke, 2008a). Since fresh halal meat can only rarely be bought in Belgian supermarkets, Muslim consumers are restricted to buying from Islamic butchers owned by people of immigrant origin. Convenience in halal meat shopping is also restricted because most ethnic shoppers only go to an Islamic butcher from their own home country or region. North African Muslims rarely visit a Turkish butcher and vice versa (Bonne, 2000). Buying fast and easily in supermarkets, as is the case for most meat consumers, is thus (not yet) an option for most Muslim consumers. Nevertheless, a – for Belgian Muslim consumers – positive evolution has been observed since work on this thesis began (2003), with a limited offer of halal meat having become available in some Carrefour supermarkets (major cities only) since the beginning of 2006 (Renard, 2006). However, the issue of trust in halal meat status due to a lack of institutionalised control of the Belgian halal meat chain is an additional barrier for shopping at the supermarket which is discussed in the next paragraph.

rate of marriages with white Dutch partners), and a significant age difference between marriage partners.



*1.4.4 Need for information and quality reassurance*

Consumers serving as the inspiration for a consumer-driven or market oriented chain organisation making their demand for safe and wholesome food in general, and meat in particular, is the main driving force for the introduction of information systems such as branding, traceability and quality assurance schemes (Gellynck et al., 2006). The basic aim behind these strategies is to minimise the perceived risk related to overall meat consumption and eliminate any negative attitudes in terms of various credence characteristics of meat, such as the safety of its production process and the quality of the final product (Fearne et al., 2001). Meeting the consumer's need for information and quality reassurance has frequently been stressed as a determinant of today's meat consumption, as result of the food crises, with trust being a key issue (Verbeke, 2001; Bernués et al., 2003; van Dorp, 2003; Marsh, Schroeder & Mintert, 2004; Piggott & March, 2004). Trust in the halal status seems to be a key success factor for the halal meat market. The halal nature of the meat needs to be beyond any doubt in order for the meat to be acceptable. Today's trust in halal meat is entirely based on personal confidence, much more than on institutional confidence, if any. Whereas Islamic butchers are almost completely trusted, supermarkets are perceived as untrustworthy since Muslim consumers lack information on the slaughtering process and can not be reassured that no cross-contamination has occurred (Bonne, 2000). Additionally, meat offered by a Muslim is always to be trusted even when information about the halal status is not directly available (Benkheira, 2002: 78). Focus group discussions with Turks, Moroccans, Antilleans and Surinamers on meat consumption in the Netherlands indicated that personal contact with and trust in the butcher is extremely important (Foquz, 1998). Muslim consumers define this confidence in terms of faith, familiarity with their own culture and speaking the same language. The role of the Islamic butcher is thus not limited to the sale of halal meat; he also has a social and cultural role to fulfil (Haut Conseil à l'Intégration, 2000). Glitsch (2000) and Becker, Benner and Glitsch (2000) confirm that since quality expectations are difficult to form for unbranded products such as meat, point of purchase becomes one of the most important extrinsic cues used for forming quality expectations. That is, consumers prefer to trust an expert, the butcher in this case, rather than forming a quality expectation on their own. It should be noted that many Muslim consumers also form quality expectations based on meat colour as an intrinsic product information cue (Bergeaud, 2000). They are convinced that halal meat is pink, less reddish than conventional meat, since the animal died from bleeding and is thus free of all blood. Although meat colour is inextricably bound with animal characteristics, Bergeaud (2000) explains that halal meat colour is mainly an indicator of freshness, since in most North African countries, where many consumers do not have the use of a refrigerator, the halal meat chain is rather short and meat is sold very quickly after slaughter. In European countries, Islamic butchers create the illusion of freshness by using specific cutting methods and by offering meat from younger animals (Bergeaud, 2004). While non-Muslim consumers use the red colour as a cue denoting freshness, Muslim consumers perceive pink meat as being fresh and halal.

Credence food characteristics like halal are becoming more and more important to consumers as a consequence of increasing concerns about safety, health, convenience, locality, ethical factors and so on (Bernués et al., 2003), for which often no extrinsic informational cues are available. Indeed, they are mainly communicated to consumers through an indication on-pack or on-label. The use of labels can be increased by uncertainty and perceived difficulty in evaluating quality which is hypothesized to be the case for Belgian halal meat consumers.

In the specific case of halal meat, although no institutional label has yet been established in Europe, the Muslim Executive of Belgium (EMB) has been charged by the Ministry of Health, Food chain safety and Environment to control the halal meat chain and to introduce a halal meat label as a result of that control. At the time of writing, it is unclear to Muslim consumers, what stages of the chain are controlled and no halal label has yet been introduced on the Belgian market. Anno 2008, the EMB only delivers certificates at the request of the slaughterhouse that declare a slaughterer to be Muslim and thus able to perform a ritual slaughter. A study of most Belgian slaughterhouses (Peeters, 2007) showed that 46.4% of the abattoirs work with a slaughterer certified by the EMB, 17.9% declare that their slaughterer has 'a certificate' in general, 14.3% have received a certificate through an imám, a further 14.3% from the Islamic centre, 3.6% from the Mosque of Paris and finally 3.6% of slaughterers simply work under oath. The study also mentions that the majority of slaughterhouses (60%) mark carcasses to indicate slaughter method (ritual slaughter), by writing in pencil or using a brand. A remarkable 29% of the abattoirs does not use any mark to identify a ritual slaughtered carcass. In Belgium, 'halal' is, therefore, largely reduced to 'ritual slaughter', meaning that it is done without stunning, by a Muslim and mostly in the direction of Mecca (Renard, 2006). Whether the other conditions (see chapter 2 for a detailed overview of the conditions for halal meat) are met is unsure, leading potentially to halal meat status uncertainty among Belgian Muslim consumers. Recently, a Belgium Halal Federation has been founded, encompassing, according to the founders, all Belgian halal control organisations. In order to fulfil their mission to introduce a Belgian halal label recognised by 'all' which can resolve the current Muslim consumer uncertainty, they are currently negotiating with the Ministry of Health, Food chain safety and Environment and the Federal Agency for the Safety of the Food Chain (De Coninck, 2007). Despite their seemingly good intentions, it is unclear what has been accomplished so far.

These contemporary consumer meat trends determining current meat consumption in general are incorporated in the studies below. Thus their applicability to halal meat consumption in particular is investigated.



## 2 Conceptual framework

The study of decision-making and consumers' food quality perception is one of the most complex areas of research into consumer behaviour (de Carlos, Garcia, Felipe, Briz & Morais, 2005). Consumers' quality perception is defined as subjective quality: user-oriented quality from a user's, in this case consumer's, point of view. To study subjective quality, numerous approaches have been proposed, all of which assume that quality perception is multidimensional; that is, quality is perceived by combining a number of quality dimensions or characteristics of the product.

A first possible approach to study consumers' quality perception is by means of a multi-attribute model, for example the Theory of Reasoned Action (TRA; Fishbein & Ajzen, 1975) or the Theory of Planned Behaviour (TPB; Ajzen, 1985; 1991). In these models, the overall evaluation of an object is explained in terms of its perceived characteristics, the evaluation of those characteristics, and an integration rule. The TRA explains the relationship between attitude and behaviour and posits causal links between various cognitive variables. The theory regards a consumer's behaviour as determined by his/her behavioural intention, where behavioural intention is a function of attitude towards the behaviour and subjective norm (SN): people engage in behaviours they intend to perform. Attitude is the psychological tendency that is expressed by evaluating a particular entity with some degree of favour or disfavour. SN assesses the social pressure on individuals to perform or not to perform certain behaviour; that is, the motivation to comply with significant others' views. For example, a consumer perceiving the consumption of meat as positive (healthy, of good taste, relatively cheap) and being positively influenced by peers to consume meat will probably have a positive intention to eat meat. The TPB adds an additional predictor of intentions for those behaviours that are characterized by incomplete volitional control. This is perceived behavioural control (PBC), which is described as perceptions of the extent to which the behaviour is considered to be controllable. It assesses the degree to which people perceive that they actually have control over enacting the behaviour in question. In our example, when eating meat is perceived as being easy on top of a positive attitude and SN, then the consumer will probably have a positive intention to eat meat. However, some barriers related to availability, price or safety concerns par example could prevent a consumer from eating meat even when a positive attitude and influence of peers is observed.

TPB is one of the most widely endorsed behaviour explanation models in applied social psychology (Ajzen, 2001) and research using it has found it to be a useful tool for understanding intention and behaviour (Kaiser, Schultz & Scheuthle, 2007). Nevertheless, Grunert (1997) criticises multi-attribute models for not taking into account the interrelationship of attributes: consumers may infer taste from price or healthiness from visible fat, but all such characteristics are treated at the same level by multi-attribute models. In addition, they do not answer the question of why some characteristics contribute positively to overall product evaluation (Brunsø et al., 2002).

An alternative to multi-attribute models are hierarchical models which take on board the abovementioned criticisms in analysing subjective quality. The Means-End-Chain (MEC)

model (Gutman, 1982, 1991) assumes that consumers' subjective product perception is established by associations between product attributes and more abstract, more central cognitive categories such as values, which can motivate behaviour and add to the weight attached to product attributes. It shows how a product characteristic is linked to consequences of consumption which in turn may be linked to the attainment of life values. Consumers are thus motivated to choose a product if it gives desirable consequences, thereby contributing to the attainment of personal values (Grunert, 1995). For example buying low fat yogurt leads to being slim and attractive and thus having friends through which the values of social recognition and self-esteem are attained (Boecker, 2005).

Both types of model, multi-attribute and hierarchical, are integrated in the Total Food Quality Model (Grunert, Larsen, Madsen & Baadsgaard, 1995), depicted in figure 1. This model integrates two elements of consumer behaviour theory: the explanation of intention to purchase as a trade-off between give and get components, and the explanation of consumer satisfaction as the discrepancy between expected and experienced quality (Brunso et al., 2002). Many characteristics of a food product cannot be ascertained before purchase; that is, they have search characteristics only to a limited degree. In order to make a choice, the consumer will develop expectations about quality, but it is only after consumption that experienced quality can be determined (and even this is limited in the case of credence characteristics). Other benefits of the TFQ model relate to its incorporation of technical product specifications, the sensory characteristics of the product and the consumer's purchase motives. By including consumers' purchase motives on top of quality evaluation, the model extends the MEC approach. According to the TFQ model, quality is not an aim in itself, but is desired because it helps satisfy purchase motives or values. It therefore includes motive or value fulfilment; that is how food products contribute to the achievement of desired consequences and values. Extrinsic cues such as labels may generate expectations about high eating quality and give the consumer a feeling of luxury and pleasure in life (Brunsø, Bredahl, Grunert & Scholderer, 2005). These desired values will, in turn, have an impact on the quality dimensions sought and how cues are perceived and evaluated. Together, they form a hierarchy of increasingly abstract cognitive categories, as proposed by the MEC Theory.

In the TFQM, quality expectations before purchase are made based on quality cues available at the point of purchase; that is, pieces of information which form expected quality (Steenkamp, 1990). A distinction is made between intrinsic (such as colour or visible fat) and extrinsic cues (such as labels or price) with the latter being more used by consumers when it is difficult to infer quality. Perceived cues are influenced by the situation of purchase, for example the amount of information offered to the consumer and the available time for shopping. Other food product characteristics, like taste, tenderness or juiciness, can only be evaluated after consumption. Moreover, other aspects such as healthiness, nutritional value or halal (credence attributes) cannot be experienced or evaluated even after purchase by consumers and hence need a special information system to induce purchase and reinforce the consumer's choice after consumption. Quality perception of credence goods are almost reduced to a communication issue, with confidence and trust in the information sources primary. Therefore, communication through labelling and trust



issues are explicitly introduced into the thesis framework for analysing halal meat consumption.

The TFQM approach is considered as the most adequate framework for the analysis of perceived food quality, its influence at the point of purchase and the design of products by the food industry in order to satisfy consumers' demands and expectations (Grunert, 2002). It can therefore serve as a framework for analysing issues related to consumer food choice and quality perception and their influence on the intention to buy, as we do here for halal meat consumption among Muslims mainly in Belgium. Although the model's principle is also the distinction between expected (before purchase) and experienced (after purchase) quality, this thesis is limited to the left-side of the model, i.e. before purchase. According to Andersen (1994) a consumer's experience (after purchase) is a reliable source of knowledge for experience characteristics but this is less useful for credence-characteristic cases such as halal meat.

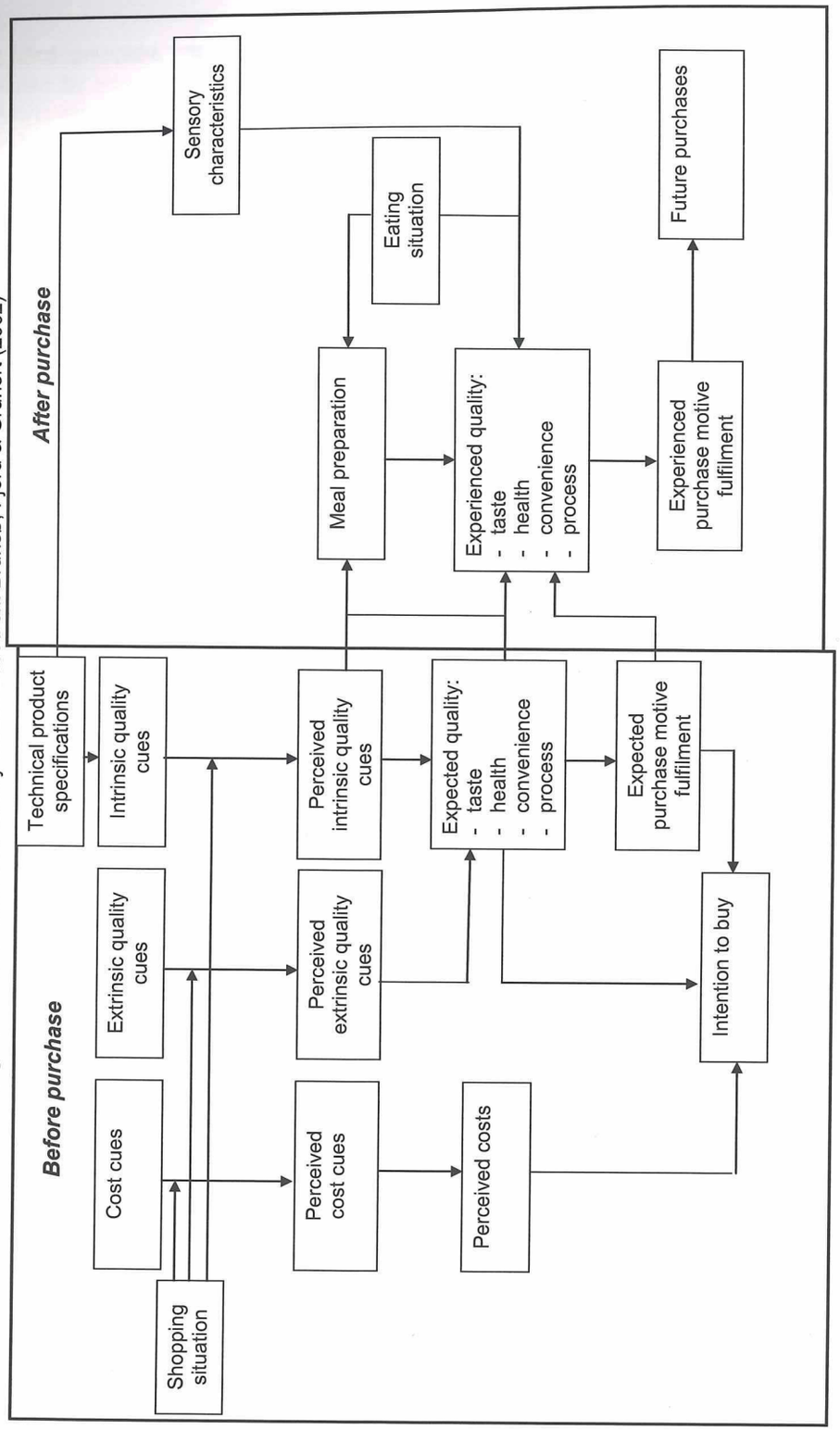



**Figure 1-1** The Total Food Quality Model. Based on: Brunsø, Fjord & Grunert (2002)



# 3 Objectives and hypotheses

## 3.1 Objectives

The overall aim of the doctoral study is to obtain insights into halal meat consumption behaviour among Muslim consumers. The TFQM (Brunsø, Fjord & Grunert, 2002) is used as a framework to investigate the determinants of halal meat consumption among Muslim consumers, with special attention to the role of religieus identity and acculturation within the meat consumption decision-making. Halal is a typical credence characteristic, which could yield some quality uncertainty among Muslim consumers upon purchases. Therefore, issues of trust and labelling are also subject of this research. With the exeption of a pilot quantitative study in France, the major part of the study focuses on Muslim consumers living in Belgium.

To meet the general objective, the following research objectives are set forth and clarified in the next paragraphs: (1) exploring Muslim consumer's attitudes towards (halal) meat and consumption motivations, (2) assessing Muslim consumer's determinants of halal meat consumption, (3) assessing Muslim consumer's trust in halal meat status, their trust in persons and confidence in institutions that could monitor and control the Belgian halal meat chain, (4) estimating Muslim consumer's willingness-to-buy and pay for certified halal labelled meat in Belgian supermarkets and butcher shops.

Belgian Muslim consumers' attitude towards (halal) meat and their consumption motivations for eating (halal) meat are explored using the MEC Theory. The results from this exploratory study allow us to proceed to investigate the determinants of halal meat consumption quantitatively through TPB constructs (attitude, SN and PBC), expanded by taking into account habit and with special attention to self-identity and acculturation as a means of assessing the role of religion within a migration context for meat consumption decisions. The adapted TPB model for halal meat is first applied to a pilot study in France and then repeated with an improved survey within a Belgian sample of Muslim consumers.

With the need for information through labelling by a trustworthy source being a major issue for halal as a credence characteristic, we then study Belgian Muslims' trust in halal meat, in information sources about halal meat and their confidence in persons and / or institutions that could monitor and control the Belgian halal meat chain and deliver a trustworthy halal label. However, such a labelling programme could increase consumer prices for halal meat and, therefore, Belgian Muslim's willingness-to-pay for the extra information or reassurance through a label is also investigated. Additionally, we investigate whether labelling could shift these consumers from their preferred traditional place of purchase, the Islamic butcher, to more modern supply chains such as the supermarket.

Finally, throughout the different studies, we wish to explore whether contemporary consumer trends in meat consumption such as the concern for food safety, convenience in shopping and preparing, the need for information and concern for animal welfare apply to Belgian Muslim consumers as well.

In sum, the left-side part of the TFQM (i.e. before purchase) is applied to fresh meat consumption among Muslim consumers living in Europe, principally Belgium.
The studied population is limited mainly to Muslims of North-African origin for three reasons. First, considering the Muslim consumer within his/her cultural background means taking into account a cultural influence on religious practices in everyday life (cf. definition of religion) which could be very difficult to control for when studying religious inspired consumption such as halal meat. Even within the Islamic religion itself, different schools of thought exist, leading to (somewhat) different explanations of the texts. For example, eating mussels is forbidden for Turkish Muslims (belonging to the Hanafi school of thought) but allowed for North African Muslims. Therefore, we prefer to study a largely cultural and religiously homogenous population: Muslims of North-African origin belonging to the Maliki school of thought within Islam. Second, Muslims with North African roots constitute the major part of the Muslim population in Belgium as well as in France where a pilot study has been done. Third, practical considerations such as language and personal knowledge and relationships within this population led us to delimit the scope of the study to these Muslim consumers and not to consider Turkish (who form the second largest Muslim population in Belgium) or other Muslim populations.
With respect to the studied behaviour, the focus of our studies is on fresh halal meat consumption. This study is the first to investigate halal meat consumption, and therefore it is necessary to first obtain insights into the consumption of a basic food product such as fresh meat before considering halal processed meat products or halal food products in general (further processed foods such as yoghurt containing gelatine). The supply chain for the latter food products is even more complex than for halal fresh meat. Nevertheless, when discussing convenience in preparing and eating in the thesis, it is inevitable that processed meat products are also considered.

## 3.2 Hypotheses

In this section, the thesis' hypotheses are presented, with a distinction made between testable hypotheses and research propositions. Since this research is one of the first to investigate halal meat consumption behaviour it was very difficult to form testable hypotheses. Therefore, we added some research propositions which are not statistically tested, but are discussed using qualitative and quantitative insights. They could, however, be tested through further research. The lack of previous scientific research on halal meat consumption also implies that the results of the first qualitative study (see chapter 3) are also used to formulate the testable hypotheses.



### *3.2.1 Testable hypotheses*

1 The determinants of intention to eat halal meat are (TPB model): attitude, subjective norms, perceived behavioural control with perceived barriers, and habit. => Chapter 4
Since this research is the first to apply the TPB to halal meat consumption, the classical components of the theory are incorporated (attitude, SN and PBC) but extended with perceived barriers such as lack of availability (Verbeke & López, 2005; Vermeir & Verbeke, 2006) and habit, which has been suggested as influencing halal meat consumption after the qualitative research (Bonne & Verbeke, 2006).

2 The predictive power of the TPB components for halal meat consumption intention improves with the degree of acculturation. => Chapter 4
In their study assessing fat-related dietary behaviour in a Chinese American sample, Liou and Contento (2001) concluded an increased predictive power of regression models with individuals who are more acculturated.

3 The most important driver of halal meat consumption is religion: religious self-identity positively influences halal meat consumption. => Chapter 4
Eating halal meat is directly inspired by religious dietary laws as prescribed in the Quranic texts (see chapter 2). Exploratory research has indeed shown that Muslim consumers eat halal meat in order to follow and express their religious teachings (Bonne & Verbeke, 2006). Moreover, Bergeaud-Blackler (2006) has described how eating halal is part of an Islamic identity among Muslim migrants. Previously, some studies of TPB to food related behaviour have successfully included self-identity as an additional predictor variable (Sparks & Shepherd, 1992; Sparks et al., 1995; Bissonette et al., 2001; Cook et al., 2002).

4 Individuals with a lower (versus higher) self-identification as a Muslim, will rely more on individual factors like personal attitude, PBC, perceived availability and barriers compared to the motivation to comply. => Chapter 4
Coşgel & Minkler (2004) claim that varying levels of compliance with religious beliefs result in different levels of behavioural commitment. In addition, exploratory research suggests that individuals who identify themselves less as a Muslim are less motivated to comply with religious rules and/or peer group pressure and more inclined to follow their personal attitudes and convictions towards halal meat (Bonne & Verbeke, 2006).

5 Muslim consumers will display more trust in other Muslims and more confidence in Islamic persons or institutions for monitoring and controling the halal status of meat. => Chapter 5
Social capital theory says that individuals who are closer in social status or who have similar personal capital are more likely to trust one another (Glaeser et al, 2000). Furthermore, Huffman et al, (2002) suggest that a person's religious upbringing can play an important role in trust formation. For trust in halal meat information sources in particular, Benkheira (2002) claims that meat offered by a Muslim is always to be trusted.

6 Consumers distrusting the halal status of meat will be more willing to pay a price premium for reassurance through a halal label. => Chapter 6
For Muslim consumers, trust relates to the certainty about the halal meat status on the one hand and meat wholesomeness on the onther hand. However, lack of institutionalised control of the Belgian halal meat chain, mass-media and word-of-mouth communication about illegal halal meat can increase Muslim consumers risk perception of eating meat that is not halal and therefore forbidden. Risk reduction associated with certification and labelling of halal meat risis consumer's utility level and consequently asserts WTP (Rodriguez, Lacaze & Lupin, 2007). Loureiro and Umberger (2003) showed that risk perception associated with meat is one of the main drivers of willingness-to-pay premiums for safer beef. Krystallis and Chryssochoidis (2005) found that WTP for organic foods is influenced by food quality and security and trust in the certification.

### *3.2.2 Research propositions*

7 Next to religious motivations, health may be a major driver of halal meat consumption, as is the case for non-Muslim consumers regarding conventional meat. => Chapter 4
The first qualitative research suggests that next to faith and respect for animal welfare, health is an important influencer on meat consumption in general and is directly linked to eating halal meat in particular (Bonne & Verbeke, 2006).

8 Muslim consumers in general question the halal meat status of the halal meat they are currently buying. => Chapter 5, 6.
Lack of institutionalised trust in Belgium can fuel consumers' quality uncertainty and increase the perceived risk of consuming meat that is not really halal (Bonne & Verbeke, 2008a). Additionally, mass media and word-of-mouth communication about possible frauds involving halal meat are detrimental to the general trust in halal meat.

9 To decrease the risk related to the purchasing decision, Muslim consumers buy meat at traditional channels, the Islamic butcher in particular, where product authenticity and trust are mediated through personal interaction with the Islamic butcher. => Chapter 3, 5, 6
For credence characteristics of meat, familiar butchers with whom consumers have direct personal contact, are by far the most trusted source of information (Becker et al., 2000). Kjaernes, Warde, Lavik and Harvey's (2005) add that when institutional trust fails, social networks become very important within cultural settings.

10 Just as for non-Muslims, food safety concerns may lead Muslim consumers to question the wholesomeness of halal meat as well as the halal status of meat. => chapter 3, 5, 6
Nowadays, health is a quality dimension that has become very important to consumers (Roininen et al., 2001). Health-oriented food quality is defined as how consumers perceive a food product to affect their health (eating healthily) and thus includes not only the functional qualities of foods but also safety and risk-related issues (avoiding unhealthy foods) (Brunsø



et al., 2002). These concerns have become more prevalent after several food crises in Europe (BSE, dioxin ...).

11 Convenience in shopping is perceived as a major shortcoming in halal meat retailing in Belgium. => chapter 6
The importance of convenience in food shopping, cooking and eating continues to increase. Convenience relates to any savings of time, physical energy, or mental energy that occur during one or more of the phases of the home food production chain: deciding what to eat, purchasing, preparation, consumption and cleaning up and thus covers more than just ready-made meals (Grunert, 2006). Nevertheless, convenience in shopping for halal food is still a major weakness in the halal meat chain in most European countries, with some exceptions. Since fresh halal meat can only rarely being bought at Belgian supermarkets, Muslim consumers are restricted to buying from Islamic butchers owned by people of immigrant origin. In addition, the issue of trust in halal meat is an additional barrier to shopping at the supermarket.

12 Convenience of preparation is becoming more important, especially for second generation Muslim families. => chapter 3, 6
According to Riaz (1999), the increasing demand for convenience foods also stretches over into Halal foods. Badloe (Donkers, 1999), founder of 'Imamin' halal prepared meals, confirms that immigrants in the Netherlands mainly eat at home whereas second generation Muslims seek convenience and also eat out. Since these 'modern' Muslims from the second generation still follow the Islamic dietary laws, halal convenience meals could meet their demand for halal convenience food.

13 Muslim consumers believe that Islamic slaughter does respect animal welfare, in spite of the general negative public opinion on the ritual slaughter process. => chapter 3, 4
Exploratory research using the MEC Theory has shown that respect for animal welfare is directly linked to the Islamic slaughter method and, next to faith and health, seems to be an important driver of eating halal meat consumption (Bonne & Verbeke, 2006).

14 Muslim consumers' lack of trust in halal meat status positively influences their need for information through a halal label to reassure them. => chapter 3, 5, 6
Meeting consumers' need for information and quality reassurance has, as a result of the recent food crises, frequently been stressed as a determinant of today's meat consumption, with trust being a key issue (Verbeke, 2001; Bernués et al., 2003; van Dorp, 2003; Marsh et al., 2004; Piggott & March, 2004). In the specific case of halal meat, no institutional label has yet been established in Belgium anno 2008. Muslims are requesting a halal label informing and assuring them about the status and the wholesomeness of halal meat, especially second or third generation Muslims who are breaking with the shopping habits of their parents (Bergeaud-Blackler, 2006). Demand for more information through a label is especially true for consumers concerned with safety and nutrition or health issues (Bernués et al., 2003).

**Table 1-1** Overview thesis hypotheses and research propositions

| | Hypotheses | Chapter |
|---|---|---|
| | **1. Testable hypotheses** | |
| 1. | Determinants of intention to eat halal meat are (TPB model): attitude, subjective norms, perceived behavioural control with perceived barriers, and habit. | 4 |
| 2. | The predictive power of the TPB components for halal meat consumption intention improves with the degree of acculturation | 4 |
| 3. | The most important driver for eating halal meat is religion: self-identity positively influences halal meat consumption. | 4 |
| 4. | Individuals with a lower (versus higher) self-identification as a Muslim, will rely more on individual factors like personal attitude, PBC, perceived availability and barriers compared to the motivation to comply. | 4 |
| 5. | Muslims will display more trust in other Muslims and more confidence in Islamic persons or institutions for monitoring and controling the halal status of meat. | 5 |
| 6. | Consumers distrusting halal meat will be more willing to pay a price premium for extra information through a halal label | 6 |
| | **2. Research propositions** | |
| 7. | Next to religious motivations, health may be a major driver for consuming halal meat as is the case for non-Muslim consumers | 4 |
| 8. | Muslim consumers in general question the halal meat status of the halal meat they are currently buying | 5, 6 |
| 9. | To decrease the risk related to the purchasing decision, Muslims buy meat at traditional channels, the Islamic butcher in specific, where product authenticity and trust are mediated through personal interaction with the Islamic butcher | 3, 5, 6 |
| 10. | Just like for non-Muslims, food safety concerns may question Muslim consumers about the wholesomeness of halal meat as well as the halal status of meat | 3, 5, 6 |
| 11. | Convenience in shopping is a major shortcoming in halal meat retailing in Belgium | 6 |
| 12. | Convenience in preparing is getting more important especially for second generation Muslim families | 3, 6 |
| 13. | Muslim consumers believe that Islamic slaughter does respect animal welfare in spite of the general negative public opinion on ritual slaughter process | 3, 4 |
| 14. | Muslim consumer's lack of trust in the halal meat status positively influences their need for information through a halal label reassuring them | 3, 5, 6 |



## 4 Thesis outline

Although the distinction between before and after purchase is the basic principle of the TFQM we only took the "before purchase part" of the model as inspiration for the framework of this thesis which is presented in figure 2 and discussed in the next paragraphs.

Quality expectations are formed based on the available quality cues with intrinsic cues covering the physical characteristics of the product and being related to the product's technical specifications. For the halal quality attribute, its technical specifications are deducted from the Islamic dietary rules prescribing the criteria for meat to become halal meat. How and which religious rules will be transformed into production and processing standards, using a HACCP[12]-like approach, is defined as the socio-technical construction of quality within the Actor-Network Theory (ANT) and will be presented in **chapter 2**. This chapter also sets forth the quality coordination systems of the Belgian halal meat market based on the economic Conventions Theory (CT) which also focuses on the socially constructed food quality criteria. These coordination mechanisms influence the preferred place of purchase for Belgian halal meat consumers in the sense that Belgian halal meat market is mainly restricted to the civic and domestic logics limiting Muslims consumers to the rather traditional supply chains for halal meat. To move a step forward to the industrial and market logic (based on a controlled halal meat chain with a halal label as output), the issue of trust in information sources and confidence in the persons or organisations who could monitor and control the chain rises. The question of who is best placed to manage the Belgian halal meat chain is studied in **chapter 5**. However, this evolution of the Belgian halal market could raise the prices of halal meat to cover the costs for control and certification. Whether Belgian Muslim consumers are prepared to pay higher prices for more quality reassurance through a label is investigated in **chapter 6** together with the question whether a label could shift them to purchase halal meat in more modern supply chains, the supermarket. Covering hence the 'give' component in the TFQM, i.e. the cost of the purchase, the price Muslim consumer's have to pay for the qualities sought.

According to the model, perceived quality is only an intermediate in consumer's help to satisfy purchase motives or values. For example female consumers look for tender meat so that their family would enjoy the meal or older consumers to avoid digestion problems in their strife for a healthy life. The values sought by consumers will, in turn, have an impact on which quality dimensions are sought and how different cues are perceived and evaluated. In this way, the model integrates the MEC approach as reported for Muslim consumers in

[12] Hazard Analysis and Critical Control Points (HACCP) is a systematic preventative approach to food safety that addresses physical, physical, chemical, and biological hazards as a means to prevention rather than the finished product. It is used in the food industry to identify potential food safety hazards, so that key actions or critical control points (CCP's) can be taken to reduce or eliminate the risk of the hazards being realised. The system includes prevention at all stages of food production and preparation.

Belgium in **chapter 3** where the consumption motives for fresh meat are investigated leading to aggregate hierarchical value maps with fresh meat attributes, consequences and values. The trade-off between purchase motives and expected quality and expected fulfilment of purchase motives against expected costs determines the intention to buy in the TFQ model which we will investigate using the TPB in a French and Belgian sample (**chapter 4**). Although the classical determinants of intention within the TPB consist of attitudes, SN and perceived behaviour control, our model is extended with the determinant habit. Additionally, we add 'self-identity' and 'acculturation' to measure the role of religion, in a migration context, in the decision-making process for halal meat. Application of the adapted TPB model for halal meat is first studied in France serving as a pilot study since it is the first time halal meat consumption is investigated using the TPB. Then, a second study within a Belgian sample is performed to find out if a refined questionnaire could improve the model's quality and to have a more reliable basis to generalise the studies findings.

Finally, to clarify and to complete the findings of the before mentioned, especially quantitative, studies, three focus groups were performed (Belgium, France and the Netherlands) in 2007 with halal meat consumers. They were conducted as part of EU FP6 SSA DIALREL, which aims at exploring the conditions for promoting the dialogue between interested parties and stakeholders and facilitating the adoption of good religious practices. Part of this study aims at gathering insights in attitude's and knowledge of Muslim consumers towards and of religious slaughter, and consumption of ritual slaughtered products. The findings of these group discussions will be used back up and better position and understand the empirical findings obtained in the different studies presented in this thesis (**chapter 7**).



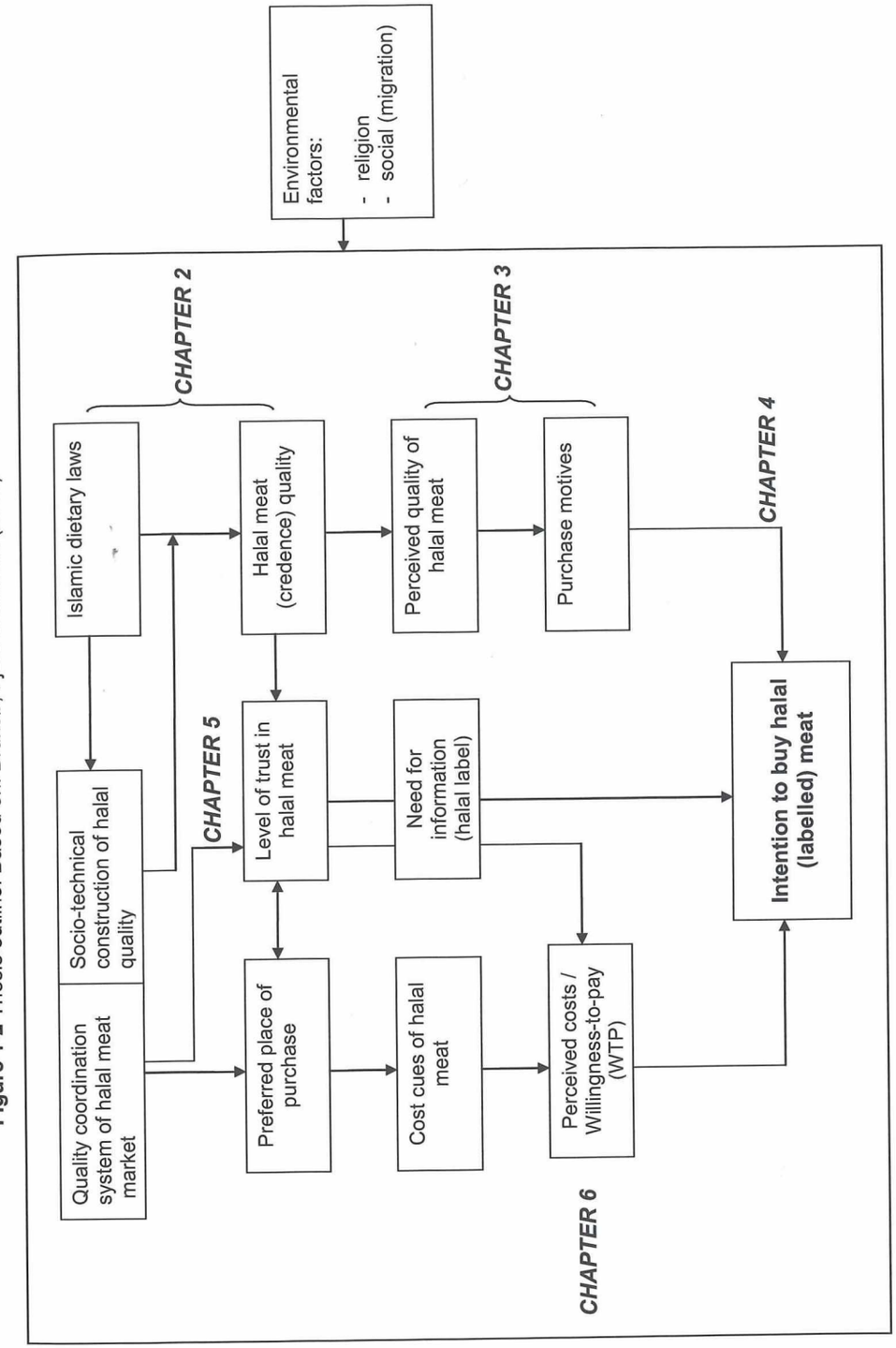



**Figure 1-2** Thesis outline. Based on: Brunsø, Fjord & Grunert (2002)

# Chapter 2

## RELIGIOUS VALUES INFORMING HALAL MEAT PRODUCTION AND THE CONTROL AND DELIVERY OF HALAL CREDENCE QUALITY

## Abstract

This chapter investigates the socio-technical construction, quality control, and coordination of the credence quality attribute "halal" throughout the halal meat chain. It is framed within the Actor-Network-Theory (ANT) and economic Conventions Theory (CT). Islamic dietary laws or prescriptions, and how these are translated into production and processing standards using a HACCP-like approach, are discussed. Current halal quality coordination is strongly based on civic and domestic logics in which Muslim consumers' prefer transacting with Muslim butchers, that is, individuals of known reputation with similar moral and religious obligations. The HACCP-like approach with identification of critical halal control points, as presented in this chapter, fits with the industrial quality convention mechanism and ideally yields guaranteed and trustworthy halal credence quality, eventually marked by a halal meat label. The socio-technical construction of halal credence quality, for example with respect to ritual slaughter, and the quality coordination mechanism aimed at reducing halal quality uncertainty among Muslim consumers, for example through labelling, are identified as key attention points in the future research agenda.

Redrafted after Bonne, K. & Verbeke, W. (2008a). Religious values informing halal meat production and the control and delivery of halal credence quality. *Agriculture and Human Values*, 25(1), 35-47.

## 1 Introduction

Halal is a credence quality attribute, i.e., a product characteristic that cannot be evaluated or ascertained by the individual consumer, even upon or after consuming the good (Darby & Karni, 1973; Grunert, 2005). As a product attribute, "halal" refers to the nature, origin, and the processing method of the food product, which entails similarities with organic foods and foods produced taking animal welfare or sustainability issues into account. In either case, the presence of the credence quality has to be clearly communicated e.g., through an indication on-pack or on-label. Furthermore, in order to have some utility value to the consumer and to be useful for purchasing decision-making, the communication source and message conveyed with respect to the credence quality have to be trustworthy and believable (Verbeke, 2005).

A relevant issue pertains to the values (religious prescriptions in this particular case) informing halal meat production, and to how halal as a credence quality becomes socially and technically constructed in today's meat supply chain. In the next paragraphs, we will explore the socio-technical construction and quality coordination of halal meat, following principles from Actor-Network Theory (ANT) and economic Conventions Theory (CT). The aim is to demonstrate how halal standards can be met in production and processing and how halal quality uncertainty can be reduced during delivery and retailing. Since ANT and CT have recently been reviewed quite extensively and applied in an agro-food context by Vannoppen et al. (2004), Straete (2004), and Kirwan (2006), among others, only the basic and relevant principles of both theories will be introduced in the following section.

## 2 Conceptual framework

Halal is a typical example of what Kirwan (2006) refers to as a socially constructed quality criterion, which incorporates not only the physical properties of the product but also the conditions under which it is produced, distributed, and retailed. The ANT (Callon, 1991) is a way of analyzing how actors in a network negotiate whether and how certain product attributes and their production method will be included in the product specification. It allows examining the processes of industrial transformation which occur at every stage of the network or food chain, and investigating how the various components interlock so as to strongly configure the behaviours of the actors involved (Murdoch, 2000). Actors involved in networks or supply chains, which act as socio-technical regimes that incorporate a specific claim of quality (Wiskerke, 2003), develop and define a product's specific quality and spell it out in the product specification. The decisions depend on the different motivations of the actors, economic necessities, technical constraints, and cultural choices (De Roest & Dufour, 2000). In the specific case of the halal meat chain, the socio-technical construction of halal is informed by dietary laws, values or religious prescriptions, which act as a means of definition for the desired quality. This socio-technical construction is laid down in a set of

principles, standards, and rules to be applied and monitored throughout the production process and the supply chain, such as proposed by Riaz and Chaudry (2004) for the specific case of halal meat using HACCP as an assurance system for halal quality.

Respecting above-mentioned standards, with a label signalling halal quality as a potential outcome is typified as industrial coordination within the economic CT (Eymard-Duvernay, 1989). Similar to ANT, the CT focuses on quality, in particular on the social and cognitive construction of quality, hence, also offering an appropriate theoretical framework for the examination of socially constructed food quality criteria (Kirwan, 2006). Conventions are defined as a set of mechanisms and rules involving the content of product specifications, roles of third parties, strategies of product differentiation and labelling (Sauvée, 1998), and are used for defining and recognizing the quality of products and for solving problems related to quality uncertainty (Vannoppen et al., 2004). Building on the seminal work by Boltanski and Thévenot (1991), Salais and Storper (1992), and Storper (1997), four models of production (also, types of quality conventions and coordination mechanisms), with particular applicability to food and the agro-food system, were identified (Sauvée, 1998): industrial, market, civic, and domestic coordination. As mentioned before, industrial coordination is based on respecting standards; the resulting compliance with standards signals quality. In market coordination, supply-demand relations and price act as quality signals. Civic coordination is based on a set of collective principles to which actors adhere. Domestic coordination is based on face-to-face relationships and on personal trust that has been established over previous transactions.[13] Because of the intangible and credence nature of "halal," domestic and civic conventions are likely to dominate depending on the degree of quality uncertainty. The specification and monitoring of industry standards and norms, eventually followed by the establishment of a halal quality label, may shift the legitimation of halal quality to a more industrial coordination mechanism.

The resulting conceptual framework for our qualitative analysis of the socio-technical construction and quality coordination of halal meat using HACCP as a potential quality assurance system is presented in Figure 1. The framework illustrates how a HACCP approach can derive from ANT and CT principles with the aim to producing and marketing desired credence qualities. Specifically, Islamic religious values and dietary laws form the basis for negotiating about the socio-technical construction and quality coordination of halal meat quality, and feed the consensus on specific standards and rules for halal meat production and control. The implementation of an integrated quality assurance system following HACCP-principles with identification and monitoring of critical control points at different levels of the meat chain could be a vehicle for guaranteeing halal meat quality and reducing halal quality uncertainty for the Muslim consumer. It should be noted that the ANT and CT theories are introduced with the primary aim of providing a unifying theoretical framework for the descriptive analysis in this chapter.

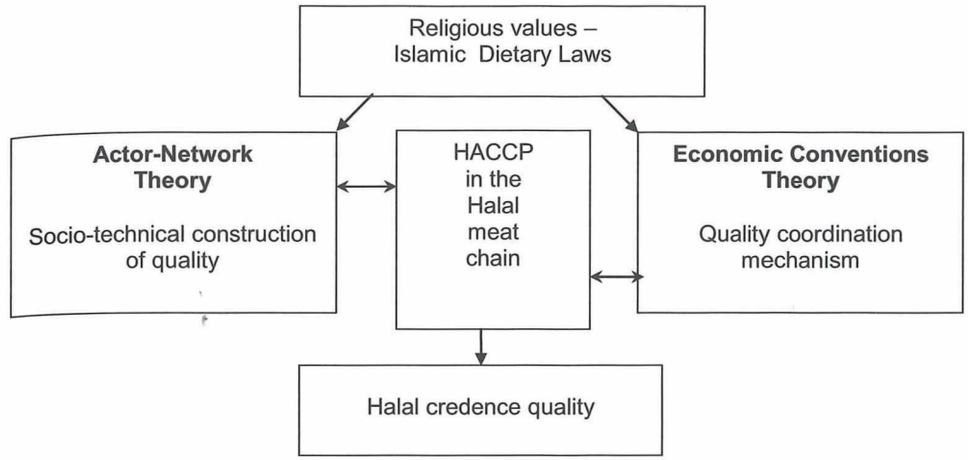
In the following sections, Islamic dietary laws or religious prescriptions and their translation into meat production, processing, and retailing standards are set forth proposing HACCP as

[13] For a comprehensive overview of these quality conventions, we refer to e.g. Sylvander (1995), Sauvée (1998), Marescotti (2000), and Vannoppen et al. (2004).



a potential quality assurance tool for monitoring, controlling, and guaranteeing the halal status of meat.

**Figure 2-1** Conceptual framework for analyzing the socio-technical construction and quality coordination mechanism for halal credence quality




## 3 Islamic dietary laws

The basic guidance about the food laws for Muslims is revealed in the Quran (the divine book) and is explained and put into practice through the Sunnah (the life, actions, and teachings of Prophet Muhammad) as recorded in the Hadith (the compilation of the traditions of Prophet Muhammad). In reference to Islam, halal is an Arabic word meaning lawful or permitted or that what is permitted and allowed by the lawgiver (Allah) and haram means unlawful or prohibited. Makrooh means discouraged or detested or what is disapproved by Allah. However, makrooh is not strongly detested, only in a less degree than halal. Finally, mashbooh means suspected; it is used to indicate the grey area between halal and haram and is best avoided.

General Quranic guidance dictates that all foods are halal except for those that are specifically mentioned as haram in the Quran or in an authentic Hadith:

O ye who believe! Eat of the good things wherewith. We have provided you, and render thanks to Allah, of it is He whom ye worship (The Quran, chapter 2, verse 168).

Human beings cannot forbid the halal and permit the haram:

And, for what your tongues describe, do not utter the lie, (saying) this is lawful and this is unlawful, in order to forge a lie against Allah; surely those who forge the lie against Allah shall not prosper (The Quran, chapter 16, verse 116).

Islamic dietary laws prohibit the consumption of alcohol, pork, blood, dead meat, and meat which has not been slaughtered according to Islamic rulings. These laws are binding and must be observed at all times. Meat is the most strictly regulated of all foods in Islam. Shatenstein and Ghadirian (1997: 226) remark that "many of the foods prohibited by religions on a temporary or permanent basis are of animal origin." The haram foods may include halal food items, which have been mixed or contaminated with haram food (Riaz and Chaudry, 2004: 11). They are specifically mentioned in the following four verses of the Quran:

He hath forbidden you only carrion, and blood, and swine flesh, and that which hath been immolated to any other than Allah ... (The Quran, chapter 2, verse 173).

Forbidden unto you (for food) are: carrion and blood and swine flesh, and that which hath been dedicated unto any other than Allah, and the strangled, and the dead through beating, and the dead through falling from a height, and that hath been killed by the goring of horns, and the devoured of wild beasts saving that which ye make lawful and that which hath been immolated to idols. And that ye swear by the divining arrows. This is an abomination.... (The Quran, chapter 5, verse 3).

Say: I do not find in that which has been revealed to me anything forbidden for an eater to eat of except that it be what has died of itself, or blood poured forth, or flesh of swine – for that surely is unclean – or that which is a transgression, other than (the name of) Allah having been invoked on it; but whoever is driven to necessity, not desiring nor exceeding the limit, then surely your Lord is Forgiving, Merciful (The Quran, chapter 6, verse 145).

He has only forbidden you what dies of itself and blood and flesh of swine and that over which any other name than that of Allah has been invoked, but whoever is driven to necessity, not desiring nor exceeding the limit, then surely Allah is Forgiving, Merciful (The Quran, chapter 16, verse 115).

Following these four Quranic verses, it is widely acknowledged that the Quran only prohibits four animal products: blood, swine, carrion or dead meat, and meat that has been immolated to idols. In the Quran there are no other prohibitions on foods, but Islamic jurists have widened the list of prohibited foods and permitted foods by interpreting other Quranic verses and hadiths. In result, also prohibited are: carnivorous animals with fangs, e.g., lions, dogs, wolves, and tigers; birds with sharp claws (birds of prey), e.g., falcons, eagles, owls, and vultures; land animals without ears, e.g., frogs and snakes; and the rat. Animals that are permitted are: ovine and bovine animals; poultry; camels; horses; wild donkeys; rabbits;



hedgehogs; porcupines; grasshoppers; worms in fruits; birds; animals that live in the sea with exemption of frogs, eels, crocodiles, sea turtles, dolphins, and sharks.

As mentioned before, meat is the most strictly regulated of the food groups (Chaudry, 1992). Apart from some prohibited animal products, the legal purification of the animal or bird for human consumption through ritual slaughter is regulated in the Islamic law or Shari'ah. Fish and other creatures that live in the water need not be ritually slaughtered. The meat of animals slaughtered according to the conditions is called zabiha or dhabiha meat, meaning purified or rendered good or wholesome. More insights in the slaughter and retail conditions for halal meat will be discussed further in this chapter.

Although some Muslims consider food of the people of the book (Jews or Christians) as lawful, the majority of the Islamic scholars share the opinion that their food must also meet the halal criteria, including the proper slaughter of animals. Chaudry et al. (2000) state that when halal meat slaughtered by Muslims is available, there is no need or reason to accept meat slaughtered by Jews or Christians. In practice, approximately 75% of the Muslims in North America follow the Islamic dietary rules, especially the avoidance of pork meat (Hunter, 1997). Consumption of pork by a Muslim would mean rejection of faith and group rulings and could be interpreted as a voluntary willingness to leave the subculture. Nevertheless, alcohol consumption, which is also punishable according to the Quran, is more or less tolerated since its consumption provides a certain pleasure in contrast to the consumption of pork meat (Benkheira, 1997; 1999).

Benkheira (1995) provides several reasons for refusing regular meat by Muslims in Europe. The first reason is the use of stunning methods in European countries for non-ritual slaughter that might kill the animal before slaughter and thus render this meat prohibited. Secondly, the possible contact between halal and haram meat (for example pork) which would turn the halal meat into haram. Furthermore, Muslims who live in countries where they form minorities, tend to return to rites of social life in quest for identity. They find ritual prohibitions (marital, sexual, and dietary in particular) very important. Finally, Benkheira (1995) perceives a very strong aversion for pork meat and not ritual slaughtered meat among Muslims in Europe. According to Gezairy (World Health Organization, 1997) many Muslims abstain from eating meat when living or travelling in non-Muslim countries where facilities for Islamic slaughter are not available.

In the past, Muslims in the US accepted kosher foods since they believed the slaughter was similar to halal slaughter and at least the animal received blessings during slaughter. However, Muslims are now learning that kosher and halal do not meet the same standards. Although both religions determine which foods are fit or proper for human consumption and determine ritual slaughter methods, there are major differences between the Islamic and the Jewish dietary laws which render also kosher certified meat not a feasible alternative for Muslims strictly following Islamic dietary laws.[14] Young Muslims in France, for example, even consider permitted foods, such as kosher, as unlawful (Bergeaud-Blackler, 2006).

[14] Differences between Islamic and Jewish dietary laws pertain mainly to what foods are permissible and the ritual slaughter method, more specifically the stunning, blessing, slaughter person and inspection after slaughter. Jewish dietary laws and kosher consumerism are described by e.g. Grandin (1990), Eliasi and Dwyer (2002), Diamond

# 4 The halal meat chain

## 4.1 Principle of quality assurance

The meat chain meeting all prescribed religious criteria is very complex and, besides controversy on some issues, there is a risk for cross-contamination at all stages, as halal meat becomes haram for example when in contact with pork meat. In addition, halal meat safety and wholesomeness in terms of the halal status is difficult to verify by consumers before purchase, during consumption, and even after, resulting in potentially uncertain quality. In this situation, implementation of a quality assurance scheme is a prerequisite so that stakeholders involved in the meat chain can claim and trust that halal meat fulfils the defined quality requirements.

Hazard Analysis Critical Control Points (HACCP) (Codex Alimentarius Commission, 2003) is a worldwide recognized and applied quality assurance system within companies situated at different levels of the agro-food chain. It consists basically of seven principles constituting a stepwise approach to identify potential hazards and critical control points (CCPs) where operational failures might create or fail to eliminate eventual hazards. It has become the internationally recognized standard for achieving the highest possible levels of food safety throughout the food chain (EurLex 93/43/EEG). The focus of quality assurance schemes has changed over time from management tools to assure food safety into more comprehensive approaches allowing the assurance and safeguarding of process standards, relating for example to animal welfare and certified production methods such as organic or halal (Wood et al., 1998; Fearne et al., 2001; Juska et al., 2003; Ten Eyck et al., 2006). Issues of debate pertain to the identification of critical control points, for which a scientific basis sometimes is lacking (Bolton et al., 2001); to costs and benefits incurred by its establishment and implementation; and to the fact that it is basically a management tool for self-regulation, requiring assessment and auditing by a third party with independent inspectors.

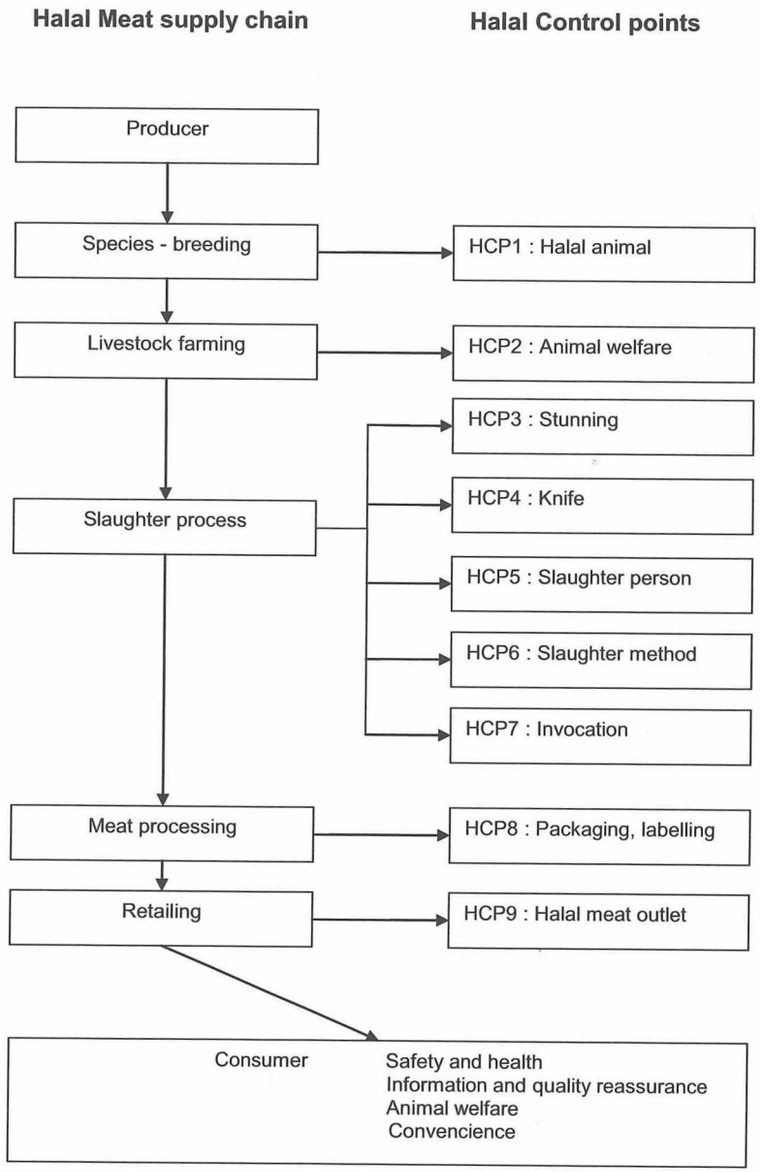
Growing demand for ritually slaughtered meat and the need for good practices from an animal welfare perspective were recently raised by Cenci-Goga et al. (2004), who concluded that proper handling requires continuous measurement, monitoring and management. Riaz and Chaudry (2004) have first introduced a HACCP approach with several halal critical control points at the slaughterhouse level to ensure the halal status of meat. However, a total or integrated halal quality approach would require that the entire halal meat chain is controlled in accordance with HACCP principles. In this respect, Zadernowski et al. (2001) and Snijders and van Knapen (2002) stressed that intervention should not focus at the abattoir or food processing stages only; it should also target risks associated with upstream pre-harvest production and downstream retailing in the farm to fork chain. According to these authors, properly structured HACCP-like methods applied

(2000), Regenstein and Regenstein (1988), Regenstein et al. (2003a; 2003b) and Genack (1990).



from the farm to the kitchen offer the best available approach to optimize meat inspection. This viewpoint has been adopted by Wyss and Brandt (2005) for organic foods resulting in the organic HACCP concept. This organic HACCP differs from standard HACCP in three aspects: it covers the entire chain, not just one enterprise; it is concerned with safeguarding a range of qualities, including taste, trustworthiness, and authenticity, not just safety in the sense of preventing a potential health hazard; and it concentrates on the aspects of procedures for the analysis of risks. Within this concept, critical control points are defined as steps at which controls should be performed to prevent or eliminate a risk rather than a food safety hazard. A similar approach, specifically applied to the halal meat chain and adapted from Riaz and Chaudry (2004), is presented in Figure 2. The Islamic dietary prescriptions, and their translation into a socio-technical regime for producing halal quality, form the basis for defining the halal critical control points (HCPs). This process is set forth in the following sections.

**Figure 2-2** The halal meat chain and identification of Halal Control Points (HCP)
Based on: Riaz and Chaudry (2004)






## 4.2 The Halal Control Points

Halal breeding – HCP1

The animal must be of an acceptable species. Prohibited species such as pork can not be turned into halal through halal slaughter. Although most authors stress the slaughter conditions in Islam, the breeding of animals should be halal as well. In the Hadith according to Abu-Dawud, it is recorded:

The Apostle of Allah prohibited eating the animal which feeds on filth and drinking its milk (Book 27, 3776).

Religious scholars agree that it is forbidden for Muslims to consume animals that have eaten filth, which is considered as an unnatural, non vegetarian diet. If this animal is nearly starved to death during 3 till 40 days and than fed a natural, vegetarian diet, the animal becomes fit for consumption. Consequently, animals that are fed meat of other animals or animal protein are forbidden. In addition, when cross-contamination between acceptable and prohibited meat occurs, the acceptable meat becomes prohibited. Therefore, halal and haram meat should be separated at all stages of the halal meat chain. Genetically modified (GM) foods could be a cause of cross-contamination as well. It is not clear yet whether these foods are allowed or forbidden for Muslims. God requires Muslims to eat of the good things:

Eat of the good things wherewith We have provided you, and transgress not in respect thereof lest My wrath come upon you; and he on whom My wrath cometh, he is lost indeed (The Quran, chapter 20, verse 81).

All forbidden foods are prescribed in the Quran or in the Hadith. Since biotechnology did not exist in ancient times, only religious scholars can tell whether GM foods are either haram or halal. However, until now, they have not edited any religious ruling that would permit or prohibit these foods (Regenstein et al., 2003b), leaving individuals free to interpret the Quran and Hadith on biotechnology. The most plausible interpretation is that GM foods containing only derivatives from halal foods are halal and GM foods containing derivatives from haram foods are haram. This interpretation is supported by the Islamic Food and Nutrition Council of America and the Islamic Jurisprudence Council in the US. It is, however, not always clear whether a GM food contains a halal or haram derivative and therefore GM foods could be interpreted as being mashbooh meaning doubtful and thus to be avoided. Most of the religious people interviewed by Maarabouni (2002) support this view. In addition to these two possible interpretations, Maarabouni (2002) adds that Muslims must take care of nature and let nothing harm the environment since earth and nature are given to them by God. If GM foods would have a negative impact on nature, than they would be bad for mankind and therefore forbidden. Moses (1999) agrees that consumer objections to GM

products may stem from concerns about possible hazards as well as ethical considerations. Based on faith and belief, people may regard biotechnology as an affront to nature, something that is beyond the right of man and should be left to God.

Animal welfare – HCP2

A second point of control in the halal meat chain pertains to animal welfare. Islam advocates humane treatment of animals before, during and after slaughter. Animals should be treated as such that they are not stressed or excited prior to slaughter; they should be nourished and well rested and drinking water must be available in holding areas. In addition, the knife should not be sharpened in front of the animal and no animal should be able to witness the slaughter of another animal. Several verses in the Hadith support this viewpoint on animal welfare.

Shaddid b. Aus said: "Two are the things which I remember Allah's Messenger (may peace be upon him) having said: Verily Allah has enjoined goodness to everything; so when you kill, kill in a good way and when you slaughter, slaughter in a good way. So every one of you should sharpen his knife, and let the slaughtered animal die comfortably." (Sahih Muslim, Book 021, Number 4810)

Narrated Hisham bin Zaid: "Jabir b. 'Abdullah reported that Allah's Messenger (may peace be upon him) forbade that any beast should be killed after it has been tied." (Sahih Muslim, book 021, number 4817)

Stunning – HCP3

The question whether stunning is allowed before halal slaughter remains an issue of debate, both within and beyond the Muslim community. According to Riaz and Chaudry (2004), stunning is preferably not used since the animal must be alive at the time of slaying and must die of bleeding rather than as a consequence of stunning. Aldeeb (2001), however, notes that Islamic dietary laws do not prohibit stunning; they forbid consumption of blood and dead animals and encourage humane handling prior to and during slaughter. Stunning, as long as it does not kill the animal, could thus be accepted to reduce suffering and meets the religious prescriptions of humane handling. Additionally, several fatwa's have been written by religious scholars who confirm Aldeeb's position towards stunning.[15] A fatwa from 1987, for example, issued by the Egyptian fatwa commission states that stunning is permitted when it is used to reduce suffering during slaughter without causing the death of the animal.
In many European countries such as Belgium, the UK, France, Germany and the Netherlands, regulations on animal welfare require that all animals must be rendered insensible before being slaughtered, except for religious or ritual slaughter. Other European

[15] Fatwa is a legal opinion concerning Islamic law.



countries such as Denmark, Switzerland, Norway and Sweden do not grant exemptions from stunning for halal and kosher slaughter. In response to the international market opportunity for halal meat, New Zealand, the largest exporter of halal slaughtered sheep meat and an important exporter of halal slaughtered beef, has supported research in the late 1970s to develop slaughter and stunning techniques that would meet both Muslim requirements and animal welfare concerns. The result was a head-only electrical stun that renders the animal only temporarily unconscious. If the animal were not slaughtered, it would thus regain conscious. Most Muslims, however, are opposed to stunning since they believe it is strictly prohibited by Islamic rulings.

Knife – HCP4

A fourth halal control point is the knife used for slaughter. This must be so sharp that the animal does not feel the pain of the cut especially when no stunning is used. The size of the knife should be proportioned to the size of the neck. As indicated before, the knife should not be sharpened in front of the animal for animal welfare reasons.

Slaughter person – HCP5

The slaughter person must be a sane, adult Muslim male or female or someone from "the people of the book," namely a Jew or a Christian. Two schools of thought of Islamic jurisprudence claim that although Jews and Christians are considered to be people of the book, the meat which is slaughtered by them is prohibited unless the name of God is mentioned while slaughtering.[16] Another school of thought considers the meat slaughtered by Jews or Christians halal without restriction since it is allowed by the Quran and they claim that the prophet Muhammad used to eat meat prepared by Jews or Christians (Sakr, 1971, Hussaini, 1993b). The Muslim must invoke the name of God before eating this meat since his name was not invoked during slaughter:

This day are (all) good things made lawful for you. The food (ta'am) of those who have received the Scriptures is lawful for you, and your food is lawful for them … (The Quran, chapter 5, verse 5).

The application of a right cut is crucial to humane handling of the animal during slaughter. This requires that Muslim slaughter men are well trained and experienced for their job. Although the competent authorities license slaughter men, monitoring of slaughter methods is mostly lacking (Sartirano et al., 2000 in Cenci-Coga et al., 2004).

Slaughter method – HCP6

[16] In Islamic law there are five schools of thought: Hanafi, Shafi'i, Maliki, Hanbali and Ja'feri.

The animal should be slaughtered by cutting the front part of the neck, severing the carotids, jugulars, trachea, and oesophagus without reaching the bone in the neck. It is preferable to turn the animal or bird towards Makah before slaughtering; however, this is only a secondary requirement.
Normally the slaughtering process of ruminants and poultry should be performed by hand. Slaughtering by hand is preferred by all Muslims and widely followed in countries where Muslims manage slaughterhouses. However, in Western countries mechanical or machine slaughter of birds is gaining acceptance among Muslims.

Invocation – HCP7

The name of Allah must be invoked while cutting. The usual formula is "In the name of Allah; Allah is the greatest" (Bismillah, Allahu' akbar). There are two main reasons to say this blessing during slaughter. The first reason is to remind the slaughterer of his responsibility in observing the prescribed requirements and to remove any doubt as to whom the animals are dedicated (Abdussalam, 1981). Secondly, it reinforces the notion that the animal is being slaughtered in the name of Allah for food and not for recreational purposes:

And do not eat of that on which Allah's name has not been mentioned, and that is most surely a transgression; and most surely the Shaitans suggest to their friends that they should contend with you; and if you obey them, you shall most surely be polytheists (The Quran, chapter 6, verse 121).

Therefore eat of that on which Allah's name has been mentioned if you are believers in His communications (The Quran, chapter 6, verse 118).

The blessing must be pronounced when passing the knife on the neck of the animal. If the slaughterer is someone from "the people of the book," he should not invoke another name than God. If he invokes the name of Jesus or Abraham, the meat is haram. All schools of thought agree that if the name of another person instead of God is mentioned, the meat is entirely prohibited (Sakr, 1971). Benkheira (2002: 77), however, mentions that invocation is only a secondary condition and that if the slaughter men should forget, the meat does not become haram.
In the case of mechanical Islamic slaughter, the following actions should be performed. A Muslim switches on the machine while pronouncing the name of God. One Muslim slaughter person is positioned behind the machine to make a cut on the neck if the machine misses a bird or if the cut is not adequate for proper bleeding. This person invokes continuously the name of God during slaughter. Neither saying a blessing only at the beginning of the process nor the use of recordings of blessings are allowed.

Packaging and labelling – HCP8



For meat to be labelled properly as halal, all the halal control points in the halal meat chain should be evaluated by a reputable supervisory organization, which acts as a third and independent control certification body. Each slaughter should be halal certified individually, unless the slaughterhouse is exclusively a halal-slaughtering facility.

Retailing – HCP9

Although most authors only stress evaluation of the slaughter process itself, distribution and retailing of halal meat is a critical issue as well in order to prevent cross-contamination. In practice, three distribution channels are available for halal meat: the Islamic butcher, the supermarket, and the farm or slaughterhouse. The first and most important distribution channel is the Islamic butcher shop, mainly owned by immigrants. It is estimated that 80% of the halal meat is purchased at the Islamic butcher in France (Haut Conseil à l'Intégration, 2000) and 75% in the Netherlands (Foquz, 1998). Exploratory research with Moroccan families in Belgium showed that 94% of the families always buy meat from an Islamic butcher. Secondly, 10% of the halal meat in France is bought at the supermarket. In the Netherlands and Belgium, this channel accounts for only 3 to 4% of the halal meat market. Belgian supermarkets do not offer fresh halal meat for sale; some sell frozen halal processed meats. Finally, some Muslims go directly to the slaughterhouse to buy their halal meat or buy animals from the farmer to slaughter themselves at home (which is an illegal practice in most European countries) or at the farm. In the Netherlands, 10 to 13% of the halal meat is bought directly from the farmer and slaughtered on the farm or at home. In France, this distribution channel is estimated to account for 10% of the halal meat market. About 68% of the Moroccan families in Ghent claimed to buy sometimes an animal at the farm. However, almost every Muslim family buys once a year a sheep for Eid-el-Adha at a farm.

## 5 Discussion

Muslims constitute an important and growing market segment for foods. In Muslim countries and even more in countries with Muslim minorities, Muslims are attentive to the content of their foods especially since food chains are becoming longer and more complex (Bergeaud-Blackler, 2005), which may fuel uncertainty relating to process characteristics and credence attributes unless these are clearly and in a trustworthy way signalled to the end consumer. Furthermore, the conception of halal has become symbolic and emotional on top of religious (Bergeaud-Blackler, 2006), in particular among second and third generation Muslims in immigrant populations. Last but not least, not only cultural or religious motives shape halal consumption, but also to a growing extent health, convenience, social and ethical issues such as ethnic identity and respect for animal welfare (Bonne & Verbeke, 2006). The evolution of the definition and symbolic meaning of halal, together with emerging shopping and eating habits among young generations entail particular challenges for producing,

controlling, and guaranteeing the credence quality that is "halal." This chapter has explored ways in which a HACCP-like approach, with the identification and monitoring of halal critical control points, can meet halal standards as informed by Islamic dietary laws and reduce quality uncertainty at the consumer level.

## 5.1 The socio-technical construction of halal quality

It is clear that in order to meet Muslim consumers' demand for halal meat in European countries; Islamic dietary laws should form the basis for the socio-technical construction of halal, resulting in a set of principles, standards, and rules to be applied throughout the production and distribution process. However, not all of these principles are observed in many of today's halal meat chains in Europe. In Belgium, for example, most principles have yet to be formalized and are thus not controlled.

For a quality assurance scheme such as HACCP to be efficient and successful, all potential hazards in the chain should be identified and scientific information for systematic assessments should be provided (Lund, 2002). The complex halal meat chain consists of actors such as breeders, slaughterhouses, certifying agencies, retailers, consumers, and religious representatives, who often have different stakes in and viewpoints on halal meat production and processing. Following the ANT, the motivations of the different actors within the meat chain, technical constraints, economic necessities or cultural choices are crucial in this discussion (De Roest & Dufour, 2000).

One fundamental problem that arises in the halal chain is reaching an agreement on the definition of halal meat and its socio-technical construction throughout the chain. Technical constraints and issues of debate relate mainly to appropriate stunning methods – if any are to be used – and to the possible use of specific restrainer systems for cattle during the ritual slaughter process not involving stunning. The major challenges pertain to providing a sound scientific basis for the debate, and for network actors to identify and agree on potential hazards and negotiate about the translation of dietary laws into concrete product specifications and process characteristics, including a set of standards and critical limits of the identified control points throughout the halal meat chain. These challenges are soon expected to become important food policy issues in European countries (Bergeaud-Blackler, 2004), and hence deserve particular attention on future research agendas.

## 5.2 Certification and quality reassurance

Another and strongly related critical issue is who should monitor, control, and certify halal quality, i.e., the issue of third party responsibility and authority for quality assessment and auditing. In most European countries, institutionalized quality reassurance systems are lacking and very few private and independent certification organizations are active. Hence, today's trust in halal meat is mainly based on personal confidence, much more than on



institutional confidence. In Belgium, for example, the Islam religion has been legally recognized in 1974. However, for many years no central ruling authority was established for Islam. This changed in 1998 with the establishment of the Muslim Executive of Belgium (EMB) as a representative institution for resident Muslims. The EMB has been charged with the introduction and execution of halal certification in Belgium. It remains unclear though whether all Islamic requirements, from breeding to retailing, are inspected and included in the certification process. Since several principles of halal meat have not been formalized yet, they are obviously not controlled. The EMB claims to be working on the supervision of the halal chain; however, by the beginning of 2007, still no controlled and certified halal label has been introduced in Belgium. In practice, the EMB only certifies that the slaughterer is a Muslim. Whether halal meat is the product of halal breeding practices, whether animal welfare is respected before and during slaughter, whether the right slaughter method is used or whether no cross-contamination has occurred is not clear and definitely not certified at this point in time.

## 5.3 Domestic and civic logics in the halal quality convention

The current halal quality convention builds mainly on civic and domestic logics (described earlier in the chapter). Buying at the Islamic butcher is exemplary for behaviour where product authenticity and trust are mediated through personal interaction. This viewpoint, also called relational trust by Kjaernes and Dulsrud (1998), posits that trust emerges in the interaction with the individual and is based on previous experiences with the individual. Quality uncertainty is reduced because the actors trust that their counterparts will provide and pay for the desired quality because they know each other well or because they agreed and trust that the exchanged product stands for the desired quality.

Becker et al. (2000) also concluded that familiar butchers, with whom consumers have good personal contact, are by far the most trusted source of information about the credence characteristics of meat in general. Similar findings have been reported with respect to organic products, where lower trust in institutionalized quality control as signalled through the organic label, associated with a higher likelihood of buying organic products in specialty shops where advice and personal reassurance could be asked for (Bech-Larsen & Grunert, 2001). This type of quality convention, with a strong preference for transacting with individuals of known reputation, is typical of domestic coordination.

Trust is also strongly based on the fact that the butcher is a Muslim who is considered to be responsible for his acts toward God. In this sense, meat sold by a Muslim is always to be trusted even when information about the halal status is not directly available (Benkheira, 2002: 78). Whereas Islamic butchers are almost completely trusted, supermarkets are perceived as being unhygienic since Muslim consumers lack information on the supply chain and cannot be reassured that no cross-contamination has occurred. Therefore, a major part of the quality convention is also related to the civic logic where the coordination of quality is based on a set of collective – in this particular case, religiously inspired –

principles to which the actors adhere. The halal credence quality is linked to a common good or aim that the actors share and attempt to realize and for which they are prepared to reduce their own interests (e.g., convenience in purchasing).

### 5.4 The industrial logic and halal quality labelling

In accordance with non-Muslims, young Muslim consumers also look for convenience in shopping and want to be guided by labelling information (Bergeaud-Blackler, 2006). Clearly, convenience during shopping is a major weakness in the halal meat chain, in particular in countries with a Muslim minority. Only recently, some European retailers like Carrefour, Auchan or Leclerc in France and Albert Heijn in the Netherlands added fresh halal meat to their assortments. For some of them, this extension of their conventional product assortment is only considered a test case. When fresh halal meat in supermarkets is not available, when it is distrusted, or when cultural barriers prevent from shopping at supermarkets (because of language problems for example), Muslims see no other option than turning to Islamic butcher shops, preferably one owned by someone from the buyer's home country. Indeed, North African Muslims rarely visit a Turkish butcher and vice versa. Nevertheless, second or third generation Muslims are breaking with the shopping habits of their parents based on a constrained personal relationship with the Islamic butcher, and thus also with the established domestic and civic quality coordination mechanisms. As a result, industrial coordination emerges as the alternative logic in order to reduce halal quality uncertainty.

Well-defined and externally controlled principles are an absolute prerequisite for a successful industrial logic. It is known that the industrial logic has particular weaknesses when it deals with providing credence characteristics, which is exactly the case with halal quality. The HACCP approach with halal control points follows the industrial logic, and could be the vehicle for guaranteeing halal meat quality. As indicated before, some principles are still debated and halal quality is not yet certified by an independent and trustworthy authority or label, hence quality reassurance based on the industrial logic seems not to suffice yet and consumers seek additional reassurance through domestic and civic coordination mechanisms. The lack of a scheme and authority for systematic monitoring and controlling of the halal control points throughout the meat chain, together with the lack of a trustworthy halal quality signal or label, drive consumers to seek additional reassurance through civic quality coordination. The major challenge for the implementation of a successful industrial logic lies in lifting the existing barriers relating to the definition of principles and standards and the establishment of independent control mechanisms that signal halal quality through a trustworthy label.



## 6 Conclusions

Religion influences eating habits even within a new cultural environment as is the case for Muslim migrants. In order to meet the specific religious-inspired requirements, the meat chain is to be adjusted to Islamic conditions for halal meat production and retailing in order to translate the desired process attribute into a set of principles, standards, and specifications of halal meat production. An integrated quality assurance system based on HACCP-principles with halal control points is needed, together with institutionalized monitoring, controlling, and guaranteeing of these principles, standards, and rules resulting in a halal meat status. This status can eventually be signalled to consumers by means of a label so as to reduce quality uncertainty in cases where domestic and civic quality coordination fall short.

A halal quality label based on well-defined and externally controlled principles is likely to gain momentum since consumers are increasingly keen on convenience in shopping and since retailers are expected to play an increasingly important role in contemporary food chains. Hence, a major challenge pertains to shifting the construction of halal credence quality from a domestic and civic coordination, where consumers rely on personal interaction for quality reassurance, to an industrial coordination of quality with a trustworthy label. However, technical constraints, diverging opinions of the involved stakeholders, lack of independent control mechanisms as well as lack of quantitative conclusive information on consumer needs and interests are retarding this evolution.

As a result, further research on the socio-technical construction and quality coordination of halal meat is recommended. One of the emerging socio-technical issues, both in public debates and on the political agenda, pertains to ritual slaughter. Furthermore, despite the growing importance of the halal market segment, little research has been conducted on Muslim consumers in general and many questions relating to their specific attitudes and food choices remain unaddressed. It is therefore also recommended that future research seek to illuminate Muslims' attitudes towards halal meat, their information seeking behaviour, and their perceived need for and confidence in labelling initiatives. Finally, better insights in the influence of Islam on meat consumption in general and the role of acculturation in subcultures are needed in order to formulate recommendations for an efficient and more effective organization of the supply chain of halal meat.

# Chapter 3

# MOTIVATIONS TOWARDS MEAT CONSUMPTION IN BELGIUM

## Abstract

In this study, the means-end chain (MEC) theory is used to investigate which attributes of fresh meat are important to Muslim consumers, to depict their motivations to buy (halal) meat and to assess whether meat consumer trends apply for Muslims in the same sense as for non-Muslims. A total of 50 in-depth laddering interviews about meat consumption have been performed with first- and second-generation Muslims living in Belgium. A common output of a means-end study is a Hierarchical Value Map (HVM) representing an aggregate cognitive or motivational structure. Overall, health, faith, respect for animal welfare, enjoying life, and care for family are the main goals Muslim consumers strive for when buying meat. Differences in motivational structures are explained by generation, age or gender effects.

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# 1 Introduction

In recent years consumers have attached increasing importance to food safety, health, naturalness, pleasure, convenience, information and ethical issues like sustainability, animal or environmental friendliness (e.g. Almas, 1999; Dupuis, 2000; Mathijs, 2003, Vermeir & Verbeke, 2005). In the specific case of fresh meat, safety guarantee, quality assurance and trustworthy information, as well as interest in animal welfare and convenience prevail as the most relevant consumer trends (Devine, 2003; Verbeke & Vackier, 2004).

In general, consumer attitude and behaviour towards food are determined by individual and environmental factors, such as marketing, information, situation and food specific properties. The focus in this chapter is on the role of religion as one of the potential individual factors shaping consumption decisions. Ample evidence has been provided that religion influences consumer attitude and behaviour in general (Delener, 1994; Pettinger et al., 2004), and food purchasing decisions and eating habits in particular (Mennell et al., 1992; Steenkamp, 1993; Steptoe et al., 1995; Shatenstein & Ghadirian, 1997; Asp, 1999; Mullen et al., 2000; Blackwell et al., 2001). In many societies, religion even plays one of the most influential roles in food choice (Dindyal, 2003; Musaiger, 1993). The impact of religion on food consumption depends on the religion itself and on the extent to which individuals follow the teachings of their religion. Several religions forbid certain foods, for instance pork and not ritually slaughtered meat in Judaism and Islam, or pork and beef in Hinduism and Buddhism, except for Christianity that has no food taboos (Sack, 2001: 218). Although religions may impose strict dietary laws, the amount of people following them may vary considerably. For instance, it is estimated that 90% of Buddhist and Hindus (Dindyal, 2003), 75% of Muslims versus only 16% of Jews in the US strictly follow their religious dietary laws (Hussaini, 1993). Factors explaining differences in adherence to religious dietary prescription pertain among others to social structures, e.g. origin, immigration, and generation differences (Limage, 2000; Saint-Blancat, 2004; Ababou, 2005).

An important issue remains whether the recent consumer trends in fresh meat like safety and health issues are equally followed by Muslim immigrants. In the present study, we investigate if fresh meat consumption patterns are comparable for immigrant Muslim consumers as for native non-Muslim consumers, and how much impact religion may have in the consumption and motivational patterns discovered. The halal meat chain in Europe has adapted to the newly emerging consumer trends like animal welfare and convenience in cooking and eating, but fails on providing institutionalized quality reassurance beyond personal trust. Furthermore, convenience in the purchasing stage is limited owing to limited availability of halal meat in much country's retail system (Bonne & Verbeke, 2008a). Halal meat in Belgium is available at butcher shops owned by immigrants in cities with an important Muslim population. In some ethnic retail shops, one can find (imported) halal frozen meat. Belgian supermarkets, however, do not offer halal meat.

The objective of this study is to investigate Belgian Muslim's motivational structure and behaviour towards fresh meat consumption in general and halal meat consumption in

particular. This objective will be pursued through a qualitative exploratory approach, more specifically laddering interviews with Muslim meat consumers.
We will first outline the means-end chain (MEC) theory and laddering technique, followed by the methodology of the study. Then, the results of the interviews are set forth and discussed. Finally conclusions and implications for further research are provided as well as limitations and directions for future research.

## 2 Means-end chain theory and laddering technique

The MEC theory holds that product attributes can be linked to more abstract, cognitive elements of consumer behaviour, like consumption specific goals and cultural values. Consumers perceive products and product attributes as means to reach certain desired ends (cultural values) which are in accordance with the values the person holds (Vannoppen, 2002). Rokeach (1968) considers these cultural values as terminal values or the ultimate purchasing goals. Goals are about what consumers want to achieve in life, whereas values pertain to why they want to do so (Gutman, 1997). Children are instilled with cultural values by key institutions, particularly family, schools, and religious institutions. They are passed on from one generation to the other within the family (Assael, 1998: 462) and are the guiding principles in people's behaviour. MECs represent consumer's motivational structures for performing a specific behaviour.
MECs are obtained through a process called laddering, referring to an in-depth, one-on-one interviewing method used to develop an understanding of how consumers translate product attributes into meaningful associations (Gutman, 1982). The conventional or 'soft laddering technique' as proposed by Reynolds and Gutman (1988) involves an interviewing format using a series of directed probes, typified by the "Why is that important to you?" question to determine sets of linkages between key perceptual elements across the range of attributes (A), consequences (C) and values (V).
This interviewing approach facilitates understanding of complex behaviour and it has yet successfully been applied in the case of food in general (Roininen, 2000) and meat (Verbeke et al., 2005; Flight et al., 2003; Westerlund, 2003); organic food consumption (Zanoli and Naspetti, 2002; Makatouni, 2002; Fotopoulos et al., 2003) and genetically modified foods (Bredahl, 1999; Grunert et al., 2001) in particular. A common output of a means-end study is a tree-like network diagram called a Hierarchical Value Map (HVM) representing a set of MECs or an aggregate cognitive structure map (Gengler et al., 1995).
In the present study, the MEC theory is used to investigate which attributes of fresh meat are important to Muslim consumers, to depict this motivational structure to buy (halal) meat and to assess whether consumer trends pertaining to safety, health, information, animal welfare and convenience apply for Muslims in the same sense as for non-Muslims.



## 3 Methodology

Interviews were conducted with 50 Muslim respondents between the age of 19 and 69 living in Gent (Belgium). Respondent recruitment was based on a snowball sampling technique starting from some friends and increasing through friends and family of the respondent. According to De Pelsmacker and Van Kenhove (2002: 104) snowball samples are allowed when respondents are difficult to reach, which is the case for Muslim consumers in Belgium. Most of the participants are of Moroccan origin (36), then Tunisian (8) and Algerian (6), representing the North-African population in Gent. The sample was furthermore stratified according to demographic control criteria such as gender, age, generation, number of years in Belgium and origin. As such, 26 females and 24 males were interviewed of whom 24 are without profession and 26 have a job. The number of members in the family varies between 1 and 7 and the number of children between 0 and 5.
Half of the respondents belong to the first generation, the other half to the 1.5 and second generation. The first generation consists of immigrants born abroad. Those born in Belgium with at least one parent born abroad form the second generation (de Valk et al., 2001). Immigrants who came to Belgium before or at the age of six are categorized as the one and a half generation since they are officially born abroad but started compulsory school – normally at the age of six - in Belgium. The number of years that the 1 and 1.5 generation have been living in Belgium varies between one and 40 years. It should be noted that some discussion is on-going about the categorization of the latter group. Neels (2000) includes Turkish and Moroccan immigrants immigrating before entering the compulsory school into the second generation. In addition, the integration sector in Belgium defines a one and a half generation consisting of immigrants born abroad who came as youngsters or young adults (Van Geertruyen, 1999). For ease of interpretation and to improve readability of the chapter, we will refer to "first" and "second" (i.e. 1.5 and second) generation in the remaining parts of this chapter. Finally, we took into account the religiousness of the respondent aiming at a heterogeneous sample of Muslims with different degrees of religious practice (praying 5 times a day, attending the Friday service at the mosque, participating in Ramadan, having attended the pilgrimage or hajj) in order to improve the representativeness of the sample.
The interviews took place either, at home or at the workplace of the respondent to make the subject feel comfortable and at ease. The discussions were conducted in Dutch or French, depending on the spoken language of the respondent and the ladders were recorded by the interviewer during the interview. The interviews were performed during October and November 2004.
The interview consisted of two parts. The objective of the first part was to collect data on meat consumption behaviour, place of purchase and socio-demographics. The second part was based on the MEC theory and on the laddering interviewing technique. Respondents were given a list of 15 attributes of fresh meat including five search (perceivable and useful for deriving quality expectation upon purchase), five experience (mainly sensory, and useful for evaluation of quality performance upon consumption) and five credence attributes. The

latter are typical attributes that can not be verified by the individual consumers, though evaluation of such attributes (like quality label, production method, origin or absence of harmful substances) is usually based on trust in the source that provided the information. The attribute list was based on earlier similar research with Belgian consumers (Verbeke et al., 2005) and adapted for Muslim consumers by adding the characteristics 'slaughter method' and 'availability' which are hypothesized to be relevant to Belgian halal meat consumers. These attributes served as the starting point for the in-depth interview. Marking attributes from a list is the quickest technique to gather attribute importance and benefits the quality of the data since possible fatigue by the respondents is reduced (Fotopoulos et al., 2003).

Respondents were first asked to indicate on a 5 point Likert scale how important they find each attribute. Then the laddering technique was applied to the most important attributes overall and to the most important one from each of the attribute categories (search, experience and credence). The consequences and values were pursued by getting the respondent reach even more abstract levels of explanation through series of "why is that important to you" questions. We thus chose the soft laddering technique in order to allow the respondent to talk freely.

In the following section, the results of the interviews are presented. First, general results on meat consumption are provided. Next, we used t-tests, cross tabulation and correlation analyses to analyse possible differences in attribute importance for demographic segments and respondents with different places of purchase. The "Laddermap software" (Gengler, 1997) is used to analyse the ladders and create the HVMs, which represent an aggregation of the individual MECs. Furthermore, verbatims translated from Dutch or French directly from the interviews are provided so as to illustrate the uncovered motivational structures.

# 4 Results

## 4.1 Meat Consumption

With respect to meat consumption, most of the respondents eat one or two times a week beef (31), chicken (37) and lamb (23). The most important place for meat purchase is the Islamic butcher (34), followed by the abattoir (7) and the farm gate (4). Meat purchases from supermarket and Belgian butcher are much lower. Only 5 respondents indicated to buy meat primarily at the supermarket (3) or a Belgian butcher (2). This means that 5 of the 50 respondents sometimes or always eat non-halal meat since halal meat is not available at the supermarket or Belgian butcher.



**Table 3-1** Importance attached to fresh meat attributes, mean and standard deviation on 5-point scale (n=50)

| | Attributes | Mean | SD |
|---|---|---|---|
| **Search** | Fresh | 4.82 | .52 |
| | Appearance | 4.29 | .92 |
| | Availability | 4.20 | 1.11 |
| | Lean | 3.82 | 1.14 |
| | Little fat | 3.78 | 1.45 |
| **Experience** | Taste | 4.68 | .55 |
| | Tender | 4.44 | .64 |
| | Smell | 4.36 | .92 |
| | Easy to prepare | 3.84 | 1.30 |
| | Juicy | 3.82 | 1.13 |
| **Credence** | Slaughter method | 4.80 | .67 |
| | Absence of hormones | 4.30 | 1.30 |
| | Production method | 4.30 | 1.09 |
| | Quality label | 4.00 | 1.46 |
| | Production region | 2.86 | 1.48 |

## 4.2 Demographic differences in attribute importance

Respondents had to indicate on a 5-point scale from 'not important' (1) to 'very important' (5) how much importance they attached to each attribute. The mean of every attribute as well as the standard deviation is showed in table 1. The attributes are ranked in order of importance for each group of attributes (search, experience and credence). The three most important attributes are freshness; slaughter method; and taste. Respondents find production region least important. Freshness is the most important search attribute, followed by appearance. Taste, tenderness and smell are the most important experience attributes, whereas slaughter method, production method and absence of hormones the most important credence attributes.

With regard to demographic influence on the importance of the features, we found that women attach greater importance to juiciness ($t=2.03$, $p<.05$) and slaughter method ($t=1.74$, $p<.10$) than men. A possible explanation could be their primary goal to provide their family and especially their children with an attractive (e.g. easier to chew) meal. Many reasons were provided for the importance of slaughter method: following the religious prescriptions, pass on a cultural tradition, animal welfare and health. These will be discussed in more detail with the HVMs.

Furthermore, the first generation tend to attach less importance to appearance ($t=-2.55$, $p<.05$), freshness ($t=-1.94$, $p<.10$), and juiciness ($t=-1.97$, $p<.10$), but more to production

region (t=2.06, p<.05) compared to the second generation. Many of the first generation men regularly buy a sheep at the farm in order to have reliable information on the origin, production method, health status, sex and age of the animal. They prefer Belgian sheep for their taste; good health and guarantee from veterinary control in contrast with foreign sheep especially sheep from Great Britain. Other motivations for buying directly at the farm are guarantee of halal slaughter, price and quantity. One respondent said: "*The problem when buying at an Islamic butcher is the lack of quality guarantee. Hence, many Muslims buy sheep or chickens to slaughter themselves to be sure it has been ritually slaughtered.*"
The older the respondents and the larger the family, the more importance is attached to little fat (age: r=.302, family size: r=.293; p<.05) to prevent cholesterol and to tenderness (age: r=.318, family size: r=.327; p<.05) in order to make the digestion and chewing easier. The larger the family, the more importance is attached to juiciness (r=.289, p<.05) and smell (r=.293, p<.05) compared to families with fewer children. Furthermore, the longer the respondent lives in Belgium the more importance is attached to absence of hormones (r=.297, p<.05) compared to respondents who more recently moved to Belgium. Most likely, these respondents could be better informed and aware of the food crises and their impact on health than relatively new immigrants. With respect to age, we found a positive correlation between age and importance of production region (r=.446, p<.01). No differences were found with respect to attribute importance for respondents from different North-African origins.

### 4.3 Attribute importance and preferred place of purchase

Slaughter method is a very important attribute of meat to almost all respondents, but is however significantly more important to those buying meat at an Islamic butcher, the farm or the slaughterhouse ($\chi^2$=69.74, p<.001). These three distribution channels solely offer halal meat. Hence, it is quite logical that respondents finding slaughter method very important always buy their meat at these points of purchase which merit most trust in their opinions.
The attributes quality label and availability, however, were not always understood since a quality label for halal meat does not (yet) exists in Belgium. Nevertheless, some interviewees said they lack information when buying meat at an Islamic butcher. They therefore express doubts about the halal status; the slaughter date and the origin of the meat. This information is now passed on through the butcher and is thus based on personal trust rather than being an institutionalized quality assurance. Two respondents gave this reason as motivation to buy non-halal meat at a supermarket instead. One female respondent of 41 years old from the first generation said: «*I lack information when buying meat from an Islamic butcher: where does it come from, when has it been slaughtered… So I buy meat from the supermarket, but I find it hard when other Moroccans are in the shop. When my mother comes, I do buy halal meat.*"



Some respondents, mainly from the second generation are strongly in favour of a halal quality label certified by a trusted official institution. One young male respondent of second generation said: "*there should be a halal label controlled by an official institution in order to prevent fraud which is probably the case now.*" Nevertheless, some of the interviewees were sceptical about buying halal meat at the supermarket. Some participants were aware that foreign supermarkets, for example in France, already offer halal labelled meat, but respondents do not dare to buy it because of lack of confidence. One female respondent of the second generation proposed to make a halal shop in the supermarket. "*Even if halal meat should be offered at the supermarket, I would not trust it. I have heard from people working in meat factories that it is not really halal meat. They should really have to convince me that the meat is halal, perhaps by putting a Muslim butcher behind the meat counter in the supermarket.*" Others would be prepared to buy halal meat from the supermarket to benefit from one-stop-shopping, again conditional on the meat bearing a reliable quality label. Apparently, the attribute quality label is significant for Muslim consumers, especially second generation, despite the rather low mean ranking.
Convenience in shopping is, next to need for information, the main reason for some respondents to buy at the supermarket or a Belgian butcher. These respondents find slaughter method somewhat important, but they either seek for information, find the Islamic butchers not hygienic or find one-stop-shopping more important. Two respondents buying at a Belgian butcher are married to a non-Muslim wife who is responsible for the meat purchase. "*My wife buys meat at the Belgian butcher because it is easy and she does not have to go to the baker shop for bread, to an Islamic butcher for meat and to a supermarket for the rest.*"
Furthermore, respondents perceive halal meat as being easily available although they have to make an effort to purchase it: "*I do not bother to drive far in order to buy halal meat.*" Respondents buying meat at the slaughterhouse have to drive 35 km at least and some respondents said to buy meat at Islamic butchers in Brussels (60 km) because of their diversified and large offer in halal meat. During summer, many Islamic butchers are closed because being on visit to their homeland. In result, halal meat availability becomes a problem in specific periods of the year. At these moments, consumers have to buy meat from another Islamic butcher, notwithstanding the lack of personal trust. "*During summer when the butcher goes on holiday, availability is a problem. I am then obliged to buy meat at that one butcher who is open, even if I know the meat is not fresh and hygienic conditions are unacceptable.*" Many respondents always buying halal meat said not to eat non-halal meat if halal meat was not available. "*If I do not find halal meat, I simply do not eat meat that day.*" Availability was sometimes interpreted as availability of halal meat at home, for example in the freezer. For these respondents, always having halal meat at home is extremely important in order to serve a proper halal meal to unexpected guests.

## 4.4 Muslim consumer's motivational structures

After coding the ladders in the Laddermap software, an implication matrix was derived. The implication matrix indicates how often the concepts have been mentioned and linked to each other. Direct as well as indirect relations are recorded. An indirect relation means that two codes are mentioned in the same ladder but not directly after each other. The implication matrix is then graphically presented through the HVM.

The HVM for the total sample of respondents is presented in figure 1. A cut-off level of 4 was chosen meaning that a link is drawn between two concepts if at least four respondents have mentioned it as a direct or indirect link. Choosing a cut-off level involves a trade-off between the amount of data represented by the map and the transparency of the map. It is suggested that a minimum of 70% of the relationships on the map should be represented (Gengler, 1997). Here, the HVM in figure 1 includes between 61% (cut-off = 8) and 82% (cut-off = 4) of all direct links mentioned by the respondents. Figure 2 depicts the HVM of the first generation and figure 3 the second generation. For these two subgroups a cut-off level of 3 was chosen representing between 61% (cut-off = 4) and 85% (cut-off = 2) for the first generation and between 69% (cut-off = 4) and 87% (cut-off = 2) of the links for the second generation. Furthermore, figure 4 represents the HVM of the male respondents and figure 5 of the female respondents. For both groups a cut-off level of 3 was chosen representing between 62% (cut-off = 4) and 85% (cut-off = 2) for the male respondents and between 68% (cut-off = 4) and 87% (cut-off = 2) of the links for the female respondents. The three consecutive levels of the map represent attributes (at the bottom), consequences (in the middle) and values (at the top). The lines represent the MECs or the associations, with the thickness indicating the strength of the associations. Hence, a very thick line between two concepts means that many respondents made this association during the interview. The figures should be interpreted as follows: for example the attribute 'slaughter method' leads to the consequence 'animal welfare' leading to the value 'respect for animals'. In the following paragraphs, the HVMs are analysed and discussed.

The overall HVM indicates four motivational structures of ladders with respect to meat consumption: sensory, health, faith and respect (for animals). The major concern, and the most central factor, for Muslim meat consumers is the perceived effect that meat has on their health and that of their family members, especially the children. All attributes, except for juiciness, lead indirectly to the value "health". Since most respondents buy meat at the Islamic butcher where meat has not been pre-packaged, hence without labelling information, colour is used as an indicator of freshness in the shop and smell at home. Several respondents said to throw the meat away immediately when a bad smell was observed before or during cooking. Most respondents reported to know what day of the week each butcher is supplied with meat and take that in account when shopping. Colour, however, was not spontaneously mentioned as a key information cue indicating slaughter method as suggested by Bergeaud (2000). One male respondent who immigrated only one year ago remarked that Belgian meat is more reddish as compared to Tunisian meat. As the author interpreted, though, colour differences are rather to be explained through breeding,



sex and age differences of the local animals. The attributes production method and absence of hormones are used as an indicator for the naturalness of meat. Many respondents find meat in their home country more natural than in Europe resulting in tastier meat with an attractive smell during cooking. An older woman said: "*In Algeria, I can really smell the meat. Here, I don't smell it and we do not know what we are eating*." On other respondent, male from the first generation, said that in Morocco, even fat has a good taste. Hence, the attribute production method with regard to meat in their home country is used as hedonistic characteristic in stead of a health factor. Lean meat is perceived as a way to prevent illness in general, and avoid cholesterol in particular, and to maintain bodyweight. Furthermore, slaughter method, here the Islamic slaughter method, is also an indicator of healthy meat since most respondents are convinced that this meat contains less blood and thus prevents bacterial contamination. The strongest links leading to health are from the attribute production method via the consequence naturalness, and from the attribute label via the consequence guarantee.

Next to the health factor, sensory characteristics of meat are important. Most respondents want to enjoy their meal and want other members of the family to like the meal. These aspects are linked to the values "enjoy life" and "taking care of the family". Attributes leading to these values are tenderness, leanness and freshness through the consequence taste, and availability through the consequence convenient. Juiciness is perceived as an attribute that directly contributes to enjoyment of the meal. The strong link from tenderness through convenience to save time can be explained by tender meat needing less cooking or boiling time which is also used as an indicator of freshness of the meat. One young, male respondent said: "*Eating meat is a total experience: smell, taste and appearance*."

The HVM, furthermore, indicates a very strong direct link from slaughter method to the value "faith" as halal meat or Islamic slaughtered meat is prescribed by the Quran. Another motive for buying halal meat is maintaining (cultural) tradition and, as we will see later, was mainly reported by second generation. Thirdly, Islamic slaughter method is perceived as respecting animal welfare with respondents being convinced that animals suffer less during ritual slaughter. One young respondent from the second generation stated: "*Despite the Islamic prescriptions for humane handling before and during slaughter, the Islamic slaughter has a reputation as being cruel. The media gives a bad representation of Islamic slaughter*."

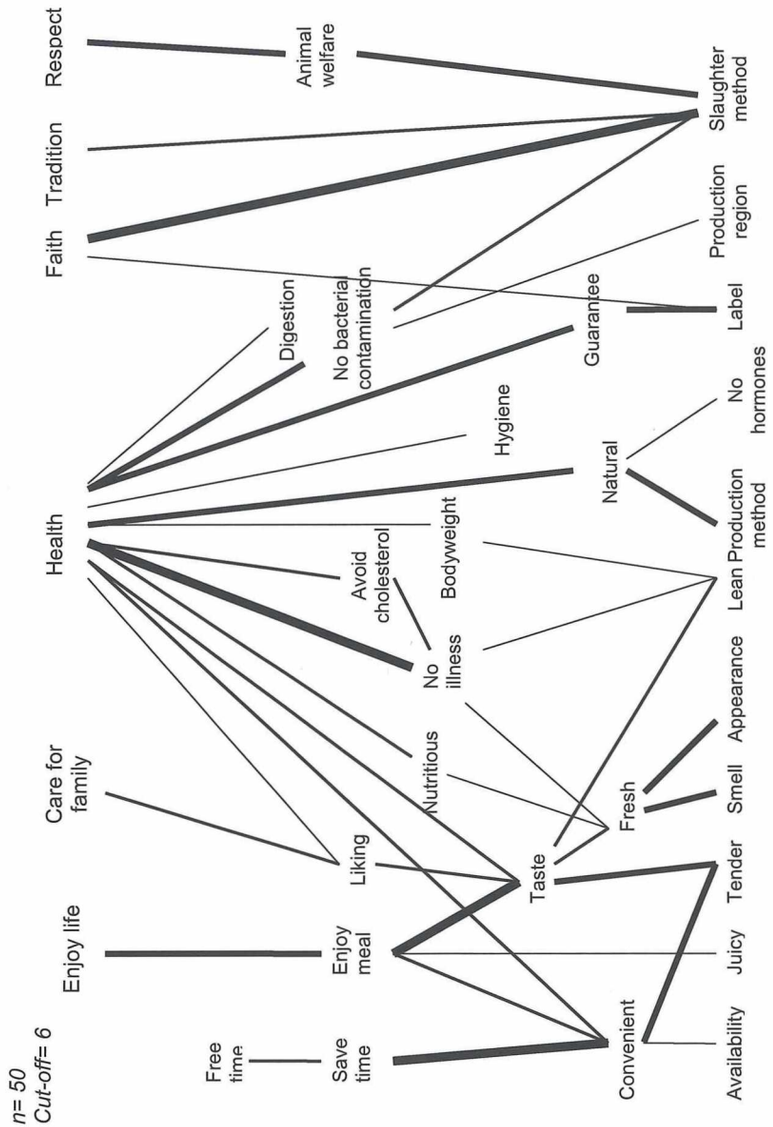



**Figure 3-1** HVM for all respondents



The maps of the two generation subgroups show an important difference in the complexity of the ladders with the one from the first generation being more complex. Since the same cut-off value was used and no difference is observed in the total number of the ladders for both subgroups (207 for the first generation and 209 for the second generation), the complexity of the first generation HVM could be due to the number of different ladders. Indeed, the first generation is a heterogeneous group consisting of both older, less educated immigrants from agricultural regions who immigrated in the sixties or seventies, and as well as some younger, well trained immigrants originating mainly from cities. Furthermore, age is significantly different between the group of first and second generation. Hence, differences seen in their motivational structures could be due either to age or to generation effects. Next to generation and age, gender might also explain differences in the motivational structures. Therefore, separate HVMs for generation and for gender will be discussed in the next paragraphs.

The main ends (values) to consume meat are the same for both generations. However, obedience and tradition are two values only mentioned by the second generation. Some respondents, especially of the second generation, said that buying halal meat has become a habit, not knowing why exactly they buy it, or stating that it has become part of their traditions, something they have learned from their parents and continue to do for their own children. One respondent of the first generation said: "*Our slaughter method is also a matter of habit*". Obedience is a value only mentioned by female respondents. One young female respondent from the second generation stated: "*I find it very important to follow the dietary rules of Islam, although I do not follow the other religious prescriptions*." This statement was shared by another young mother born in Belgium who said trying to follow the Islamic rules as good as possible, and claimed never to have bought non-halal meat in her life.

Furthermore, health factors in general are more present for the first generation. The importance attached to consequences relating to digestion and avoidance of cholesterol could be due rather to age effects within the first generation. Or as one older man said: "*Everything we consume is for our health.*" Moreover, the strong link between tenderness and taste is presumably rather an age than a generation effect, with older consumers attaching more importance to tenderness (easy to chew) as a precursor of taste experience (Heath, 2002). Older consumers tend in general to attach more importance to hedonistic characteristics and health, whereas for younger respondents naturalness is strongly linked to health (Olsen, 2003; Verbeke, 2005).

**Figure 3-2** HVM for first generation Muslim meat consumers

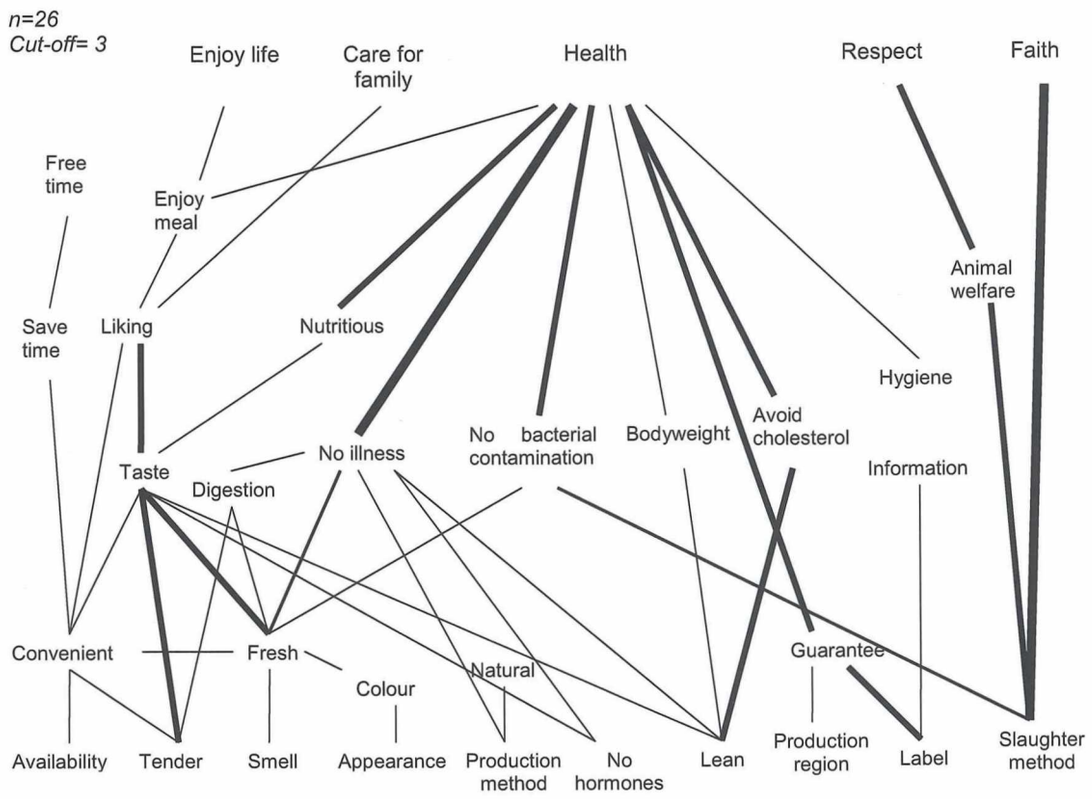





**Figure 3-3** HVM for second generation Muslim meat consumers

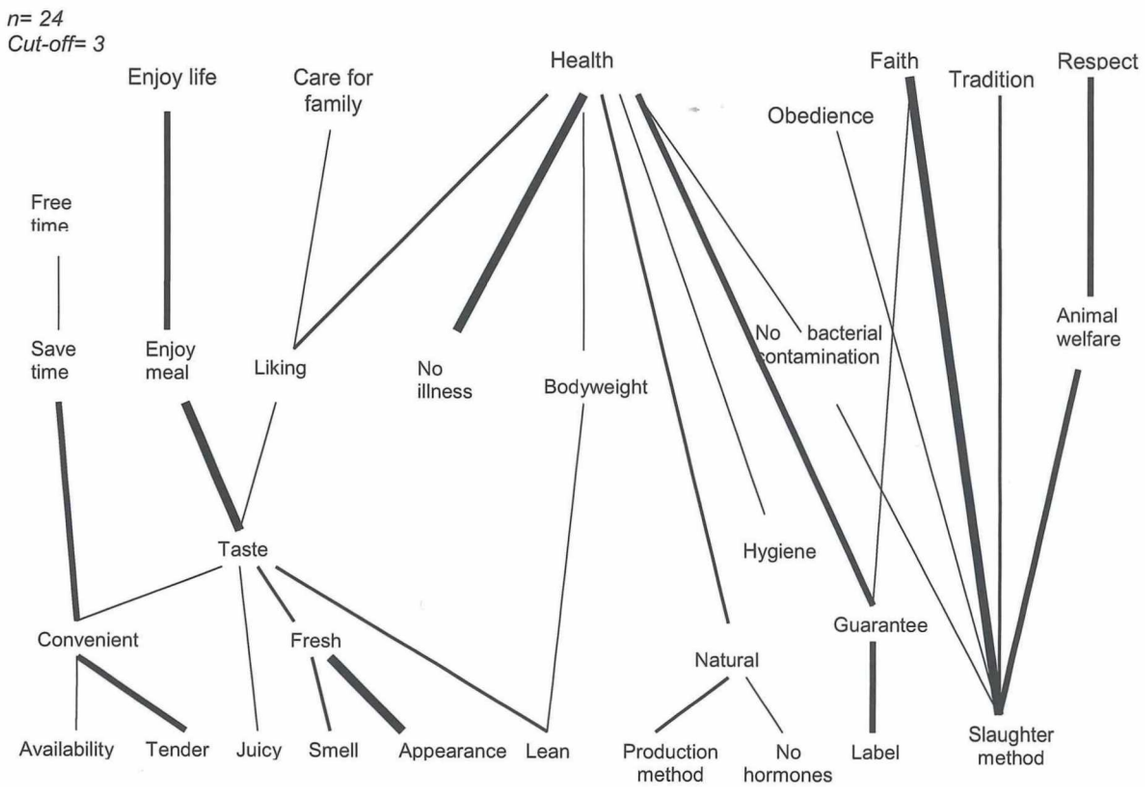


**Figure 3-4** HVM for male Muslim meat consumers

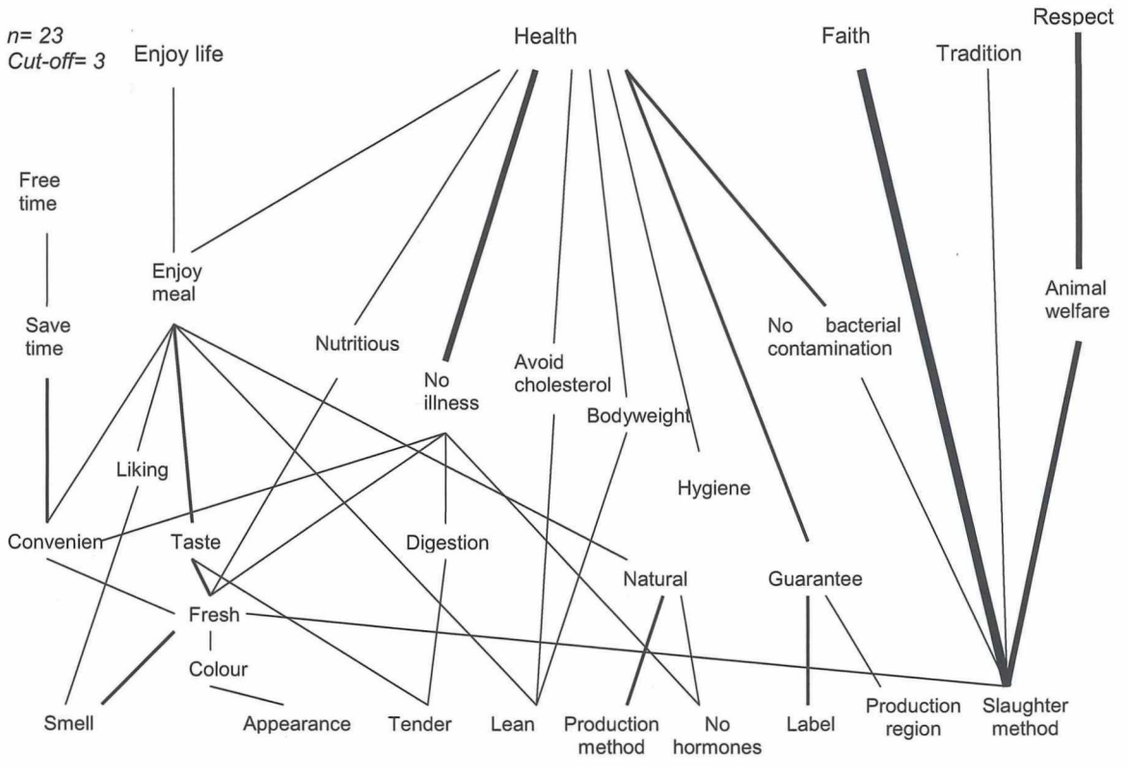





**Figure 3-5** HVM for female Muslim meat consumers

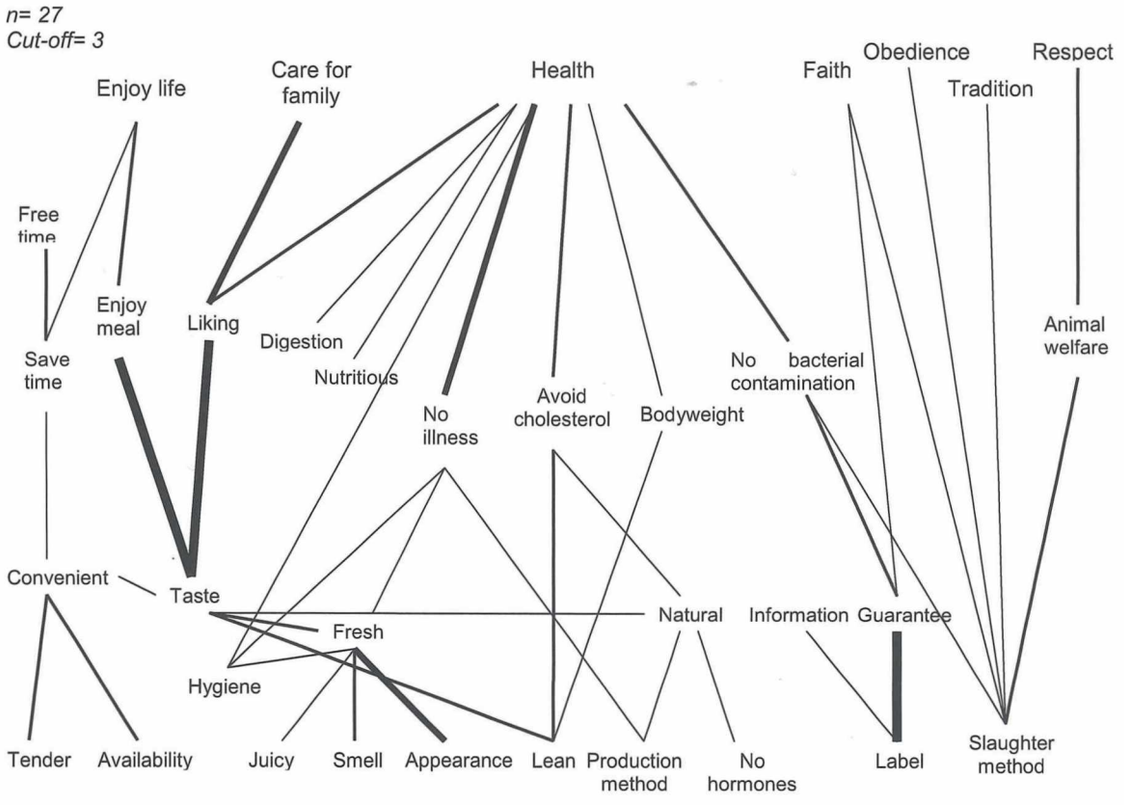


Figure 2 confirms that, for the first generation and especially for male respondents, the attribute production region is an additional guarantee for healthy meat, next to label. One young, male respondent of the second generation said that their fathers continue to buy sheep at the farm, where production region is an important attribute, in contrast with second generation who generally buys at the Islamic butcher. For the second generation, however, and for female respondents in particular a label can be either a guarantee for their health or for the slaughter method. As we mentioned before, especially this generation is in favour of institutionalized quality assurance resulting in halal labelled meat.

For female respondents, very strong sensory links are observed either for the pleasure of their own meal or for others, especially the children. The consequence "liking," leading to the value "care for family", is only mentioned by women. Furthermore, women prefer tender meat for convenience during cooking and express their preference for easily available meat for convenience in shopping, both resulting in more free time and thus enjoyment of life. A young female respondent of the second generation stated "*to want both: tradition and convenience in shopping*" meaning the availability of halal labelled meat in supermarkets.

Only first generation and male respondents use colour as an indicator for freshness of the meat. Moreover, a very strong ladder leading from slaughter method directly to faith on the one hand and to respect for animals on the other hand is observed for male respondents.

## 5 Discussion and conclusions

The present study reports insights from exploratory research focusing on the motivational structure of Muslim consumers about meat in Gent (Belgium). Next to freshness and taste, slaughter method is one of the most important attributes of fresh meat explaining why most respondents buy (halal) meat at an Islamic butcher. Overall, health, faith, respect (for animals), enjoying life, and care for family, are the main goals Muslim consumers strive for when buying meat. The resulting motivational structures for Muslim consumers facing meat purchasing decisions are more complex and richer than for non-Muslim Belgians as described in the study by Verbeke et al. (2005). Obviously, the higher value "faith" does not emerge in Belgian consumer's motivational structures, but the same goes for "respect" and "tradition", which are not part of non-Muslim Belgian's motivational structures when buying meat. Nevertheless, when comparing the motivational structures within the Muslim population, it is clear that differences can be explained by generation, age or gender effects, which corroborates among others Flight et al. (2003) who reported that gender and age determine motivations to buy fresh meat.

Differences attributed to age effects are mainly the high importance of health characteristics for older respondents. With respect to generation effects, the first generation buys halal meat for reasons of faith, health and respect for animal welfare, whereas the second generation tend to buy halal meat in order to continue a (cultural) tradition. Furthermore,



male respondents of the first generation use colour as an indicator of freshness and the attribute production region as a guarantee for health, next to a quality label. Women of the second generation, however, see a quality label not only as a guarantee for health but as an assurance of the halal status of the meat. The question arises whether the traditional role pattern in Muslim families where especially men are responsible for meat purchases, are changing through generations. Young women are strongly in favour of a quality label for halal meat not only for reassurance of the slaughter method, but also for reasons of convenience in shopping. Bernués et al. (2003) confirm that young consumers attach greater importance to the label as a source of information. If the label verifies the credence quality (of the slaughter method), then it becomes a search quality attribute in the shop (Becker, 2000). Nevertheless, credibility of the information source is one of the main factors determining the perception of credence quality attributes (Grunert, 2001) and therefore, a credible institutionalised reassurance system should be put in place for halal meat.

This study faces some limitations to the methodology used especially possible social desirable responses given by the participants when not being alone during the interview, sometimes other family members were present. This same comment on social desirable responses could account for the, although very limited, interviews with friends or acquaintances (4 of the 50) of the interviewer. On the other hand, however, being an unknown interviewer for most of the participants incites them to talk more freely about their consumption habits and goals.

Further research, using quantitative methods, will be implemented in order to validate the findings of this study with larger consumer samples. The main hypothesis is that religion plays a major role in the consumption of (halal) meat for Muslim consumers. For second generation, habits and faith are important motivations for halal meat consumption. Another hypothesis is that barriers, such as availability and trust, as well as the influence of others like family, friends, and the Muslim community in general, add to the explanation of halal meat consumption patterns. Finally, exploratory insights in Muslim consumer's interest in meat labelling, as described in this chapter, will be further validated.

# Chapter 4

# DETERMINANTS OF HALAL MEAT CONSUMPTION

## Abstract

In this chapter, two studies are presented investigating the determinants of halal meat consumption within a Muslim migration population using the Theory of Planned Behaviour as a conceptual framework, with a focus on the role of self-identity as a Muslim and acculturation in the host country. Cross-sectional data were collected through a pilot survey with 576 Muslim consumers in France; and a second survey with 367 Muslim consumers in Belgium. Findings reveal that in general, a positive personal attitude towards the consumption of halal meat, the influence of peers and the perceived control over consuming halal meat predict the intention to eat halal meat among French Muslim consumers. In Belgium, perceived lack of safety measures or poor belief in the safety controls are shown to be potential barriers preventing Muslim consumers from eating halal meat which is especially influenced by a positive health attitude towards halal meat. In France, low acculturated Muslims rely completely on their personal attitude towards eating halal meat, whereas high dietary acculturated Muslims rely on attitude and perceived control when intending to consume halal meat. Low acculturated Belgian Muslims rely strongly on their positive personal attitude towards the health status of halal meat, whereas high acculturated Muslims rely on health attitude, animal welfare attitudes and safety when intending to consume halal meat. French Muslim consumers with a low Muslim self-identity intend to eat halal meat because they find it very important and because they consider it as their personal conviction. Muslims with a high Muslim self-identity are rather influenced by peers in their social environment and by the degree of control they believe to have over eating halal meat. In Belgium, Muslim consumers with a high Muslim self-identity intend to eat halal meat because they believe that it is healthy whereas Muslims with a low Muslim self-identity are rather influenced by religious peers, together with their personal health attitude and availability concerns.

Redrafted after Bonne, K., Vermeir, I., Bergeaud-Blackler, F. & Verbeke, W. (2007). Determinants of halal meat consumption in France. *British Food Journal*, 109 (5), 367-386. and Bonne, K., Vermeir, I. & Verbeke, W. (2009). Impact of religion on halal meat consumption decision-making in Belgium. *Journal of International Food and Agribusiness Marketing*, 21 (1), 1-22.

# 1 Introduction

In many societies, religion plays an influential role in shaping food choice (Musaiger, 1993; Dindyal, 2003). Although religion has been a significant force in the lives of many individuals, its exact role in consumer food choice is rather unclear (Delener, 1994). Ample evidence has been provided that religion can influence consumer attitude and behaviour in general (Delener, 1994; Kanekar & Merchant, 2001; Pettinger et al,, 2004), and food purchasing decisions and eating habits in particular (Mennell et al., 1992; Shatenstein & Ghadirian, 1997; Asp, 1999; Mullen et al., 2000; Just et al., 2007). The impact of religion on food consumption depends on the religion itself and on the extent to which individuals interpret and follow the teachings of their religion (Heiman et al., 2005). Most religions forbid certain foods except for Christianity that has no food taboos (Sack, 2001: 218). Especially meat is often strictly regulated in cases where religious considerations prevail (Shatenstein & Ghadirian, 1997). One of the religions with food prohibitions is Islam. In addition to the five pillars in Islam, Muslims have to follow a set of dietary prescriptions intended to advance their well being which determine which foods are halal. A large majority of Muslim consumers tend to follow these dietary laws even after having emigrated. For example, a recent study revealed that 84% of Muslims in France always eat halal meat (Bergeaud-Blackler & Bonne, 2007). Factors explaining differences in adherence to religious dietary prescriptions pertain among others to social structures, e.g. origin, immigration, and generation differences (Limage, 2000; Saint-Blancat, 2004; Ababou, 2005; Bergeaud-Blackler & Bonne, 2007). However, not only religious motives determine halal meat consumption, but also health, respect for animal welfare (Bonne & Verbeke, 2006; Bergeaud-Blackler & Bonne, 2007) and convenience in cooking and eating (Bonne & Verbeke, 2006).

Major European retailers such as Carrefour or Albert Heijn are now testing to include halal meat in their assortment. Previous attempts in a retail environment were often unsuccessful because of lack of insights in food consumption behaviour of Muslims (Ramdani, 2005). Fundamental problems that arise are the different definitions of halal meat and the different quality certifications. These problems are expected to soon become important food policy issues in many European countries (Bergeaud-Blackler, 2004). Nowadays, Muslims are making their presence felt socially and politically and are requesting halal labelled food products (Riaz & Chaudry, 2004; Shafie & Othman, 2006). Therefore, marketers, certifying organisations and policy makers need better insights in halal meat consumption which is hypothesised to differ from conventional meat consumption decision-making.

This chapter has two major objectives. The first objective is to investigate Muslim consumer behaviour towards halal meat using the classical Theory of Planned Behaviour (TPB) as a conceptual framework. The second objective consists of measuring whether – within a religion and migration context – the validity and predictive power of the TPB is influenced by religious self-identity and acculturation. Since few studies investigated food decision making within a religious context thus far and no research inquired halal food or more specific meat

consumption, we first performed a pilot study in France which was then taken as the point of departure for the second TPB study with a Belgian Muslim sample.
Although the institutional environment is rather similar in both Belgium and France, differences pertain mainly to the Muslim population itself and the development of the halal food market and marketing environment. The Muslim population in Belgium consists mainly of Moroccan and Turkish immigrants and their descendents. This migration has taken place more recently than in the case of France, and therefore, the migration population is less rooted in the host (Belgian) society. Furthermore, and partly also owing to the more recent migration, the Belgian halal meat market is less developed than in France, resulting in a more limited offer and availability of halal meat in Belgium. Hence, any observed differences in the decision making process for halal meat between both countries, can potentially be attributed to differences in individual and environmental factors.
In sum we aim to investigate the influence of the classical components of the TPB on intention to consume meat within an ethnic and religious minority population of Muslims originating especially from North-Africa and currently living in France and Belgium. We argue that meat consumption decisions within a religious context could differ significantly from purchase situations where religion does not play a key role. By extending the TPB model with self-identity and acculturation, the influence of the cultural and more specific religious context is captured.

## 2 Conceptual framework

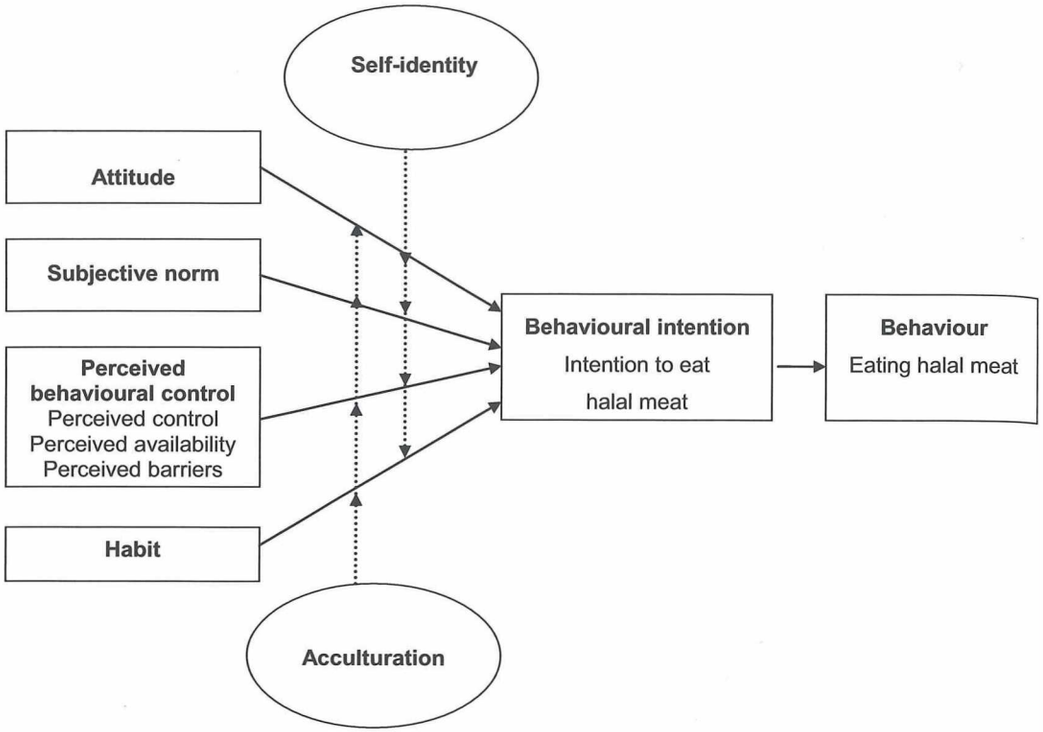
Many different models have been proposed to explain consumer behaviour towards food in general (Sparks & Shepherd, 1992; Thompson et al., 1994; Conner & Sparks, 1996; Grunert et al., 1996); however, no study has ever focused specifically on investigating the determinants of halal meat consumption.
The TPB (TPB; Ajzen, 1985; 1991) postulates three conceptually independent determinants of behavioural intention: attitude, subjective norm (SN) and perceived behavioural control (PBC). Attitude is the psychological tendency that is expressed by evaluating a particular entity with some degree of favour or disfavour (Eagly & Chaiken, 1995). SN assesses the social pressure on individuals to perform or not to perform certain behaviour i.e. the motivation to comply with significant others' views. PBC is described as perceptions of the extent to which the behaviour is considered to be controllable. It assesses the degree to which people perceive that they actually have control over enacting the behaviour of interest (Liou & Contento, 2001). PBC is of greater interest than actual control since it refers to people's perception of the ease or difficulty of performing the behaviour of interest (Verbeke & Vackier, 2005). The link between PBC and behaviour suggests that consumers are more likely to engage in behaviours they feel to have control over and are prevented from carrying out behaviours over which they feel to have no control. Control factors such as perceived availability may facilitate or inhibit the performance of behaviour (Conner &



Armitage, 1998; Verbeke & Lopez, 2005; Tarkiainen & Sundqvist, 2005; Verbeke, 2005). For example, low perceived availability of halal meat may hinder someone from its consumption as shown for instance in the case of sustainable food consumption (Vermeir & Verbeke, 2006).
In addition, Conner and Armitage (1998) suggest incorporating habit measures as predictors of behaviour in the TPB. Habit is defined as behaviour that has become automatic and is beyond an individual's awareness. Several studies using TPB to food related behaviour have successfully included habit as an independent predictor of intentions (Verbeke et al., 2004; Honkanen et al., 2005). Therefore, habit will be included as a separate component of the TPB.
In the present study, the influence of the classical components of the TPB on intention to consume meat is measured within an ethnic minority population of Muslims originating especially from North-Africa and currently living in France and Belgium. For them, eating foods that meet the religious prescriptions can be considered to be an expression of religion. Therefore, we argue that meat consumption decisions within a religious context could differ significantly from purchase situations where religion does not play a key role. By extending the model with self-identity and dietary acculturation, the influence of the cultural and more specific religious context in which halal meat is consumed is investigated.
Self-identity can be interpreted as a label that people use to describe themselves. It is assumed to be the result of social interaction and the cause of subsequent behaviour (Biddle et al., 1987). Self-identity reflects the extent to which an actor sees him- or herself as fulfilling the criteria for any societal role, for example "someone who is concerned with green issues" (Sparks & Shepherd, 1992). Previously, some studies of TPB to food related behaviour have successfully included self-identity as an additional predictor variable (Sparks & Shepherd, 1992; Sparks et al., 1995; Bissonette et al., 2001; Cook et al., 2002). Others, however, have not found self-identity to influence behavioural intention (Povey et al., 2001; Robinson & Smith, 2002). Conner and Armitage (1998) concluded that the effects of self-identity may depend on the behaviour in question. Here, the influence of self-identity "as a Muslim" measuring the self-perception of Muslims about their religious identity, will be investigated through differentiating consumers who highly identify themselves as being a Muslim from consumers with a rather low identification with being a Muslim.
Acculturation in general is used to denote the process by which a racial or ethnic group, usually a minority, adopts the cultural patterns such as beliefs, religion, and language of the host culture (Jamal, 1996; Laroche et al., 1999). Hence, it is the manner in which cultural identity may or may not change when an individual is exposed to a new majority culture (Goetz, 2003). Since the focus of this study is on food behaviour of immigrants we chose to measure dietary acculturation referring to the process that occurs when members of a minority group adopt the eating pattern or food choices of the host culture (Negy & Woods, 1992; Satia et al., 2001). Liou and Contento (2001) successfully added acculturation as a predictor variable for intention to engage in reduced-fat diets among Chinese Americans. Similarly to self-identity, dietary acculturation is added to the theoretical framework to investigate whether consumers who are highly versus lowly dietary acculturated rely

differently on personal attitude, SN or PBC to make their halal meat consumption decision. The resulting framework is presented in figure 1.

**Figure 4-1** Conceptual framework: Theory of Planned Behaviour with application to halal meat consumption. Based on: Ajzen (1991).




## 3 Research hypotheses

Muslims in Europe are mainly immigrants; hence, the question arises whether they maintain their food habits or adapt their food choice to their new food and cultural environment. Stodolska and Livengood (2006) concluded from their study that incentives to preserve traditions such as dress, diet, and leisure styles among Muslim minorities are strong enough to counteract pressure from the out-group since these customs have strong spiritual underpinnings in addition to cultural roots. In addition, the authors posit that assimilation among ethno-religious minorities is slower than among ethnic groups defined by their national origin. Sekhon and Szmigin (2005) showed that even second generation



immigrants are still integrating into the dominant culture rather than becoming part of it since they have the desire to stay loyal to the older generation, the home country and even eastern values.

With respect to acculturation within the TPB model, Liou and Contento (2001) concluded in their study an increased predictive power of the regression models with individuals who are more acculturated. More specifically, when the degree of acculturation increased, their independent variables (amongst others attitude, health concern, self-efficacy) predicted behavioural intention significantly better. Verbeke and Lopez (2005) found the language-factor in acculturation and time of residence to influence Hispanics' food consumption in Belgium. Furthermore, previous exploratory research showed that time of residence measured as generation, associates with drivers to consume halal meat (Bonne & Verbeke, 2006). Following the above, we posit the first hypothesis as:

*Hypothesis 1*: The predictive power of the TPB components for behavioural intention improves with the degree of acculturation in the host culture.

In most Muslim societies, one can observe a strong religious socialization, much stronger than within a Western, secularized country (Geels, 1997). The author shows the importance of the Quran for the individual Muslim and concludes that it represent a basic aspect of cultural identity. Moreover, in a migration context, religion can become an important marker of identity and a significant instrument for self-categorisation and, therefore, it can not only help immigrants to find an identity (Burton, 2004) but it can also provide them something to hold on to an overwhelming flow of changing processes (Dumont, 2003). "As with national groups, religious groups derive their distinct identity in part from special food ways" (Sarri et al., 2006: 7). Halal meat can be considered such a 'special food' shaped by the Islamic dietary prescriptions. Exploratory research using the Means-End-Chain Theory confirmed that Muslim consumers eat halal meat in order to follow and express their religious teachings (Bonne & Verbeke, 2006). In a related vein, Bergeaud-Blackler and Bonne (2007) showed that religion is a very important motivator for eating halal meat. Moreover, Bergeaud-Blackler (2006) described how eating halal is part of a Muslim or Islamic identity among Muslim migrates. However, various levels of compliance to the religious beliefs result in different levels of behavioural commitment (Coşgel & Minkler, 2004). In addition, previous exploratory research suggests that individuals, who consider themselves less as a Muslim, are less motivated to comply with religious rules and/or peer group pressure, while they are more inclined to follow their personal attitudes and convictions towards halal meat (Bonne & Verbeke, 2006). Easy availability of halal meat products could invite them to consume, on the other hand, consumption barriers such as price or safety issues may prevent them from eating halal meat. On the contrary, individuals with a higher Muslim identification could be more inclined to follow Islamic rules and customs and therefore be more open for peer influence. Therefore, the following hypothesis is set forth:

*Hypothesis 2*: Individuals with a lower (versus higher) self-identification as a Muslim, will rely more on individual factors like personal attitude, PBC, perceived availability and barriers compared to the motivation to comply.

# 4 Empirical research

## 4.1 Pilot study in France

### *4.1.1 Materials and method*

Cross-sectional data were collected through a survey in France. Participants were recruited during a yearly meeting of Muslims (22ième Rencontre Annuel des Musulmans de France) in Paris organised by the UOIF (Union of French Islamic organisations)[17] between the 25 and the 28 of March 2005. A stand was hired next to Islamic organisations and three Moroccan students speaking French and Arabic were engaged as poll-takers. For interviewing participants, respondents were selected based on convenience or the judgments of the researchers and poll-takers (convenience sample), and were then invited to complete the self-administered questionnaire which took about 20-40 minutes. In total, more than 600 surveys were completed of which 576 were valid for analysis.
All respondents were halal meat consumers since the objective was to explain the determinants of halal meat consumption. Other selection criteria were age (above 18 years), place of residence (France), and being involved with meat purchasing decisions within the household. Sample characteristics are presented in table 1 in the result section.

The survey used a structured questionnaire in French, which was pre-tested and refined prior to field work. The questionnaire included items measuring the components of the proposed model of the TPB. Behavioural intention was measured on an eight-point scale (ranging from 0 to 7) asking 'How many times do you intend to eat halal meat in the next seven days, today included' (Conner & Sparks, 1996). Attitude was measured through the statement 'Halal meat is important to me' (Magnussen et al., 2001; Bissonnette & Monaco, 2001; Robinson & Smith, 2002) on a five point scale ranging from 'totally disagree' to 'totally

[17] A first religious meeting of this kind was organised in the early eighties for members of the Islamic associations in France. Now, this yearly meeting has become an international event reassembling more than 50,000 (according to the UOIF) Muslims, especially originating from North-Africa and residing all over France and even in neighbouring countries. During these four days, visitors attend conferences, buy books, clothes or other things at the many stands available and pray. Some Muslims consider this yearly meeting as a pilgrimage and install themselves for four days of prayer and religious exchanges; others just visit the fair for one day with some friends or family to pass a nice day. The UOIF was founded in 1983 when 15 Islamic organisations located in Frances major cities felt the need to exchange experiences and coordinate their efforts. Today, the UOIF regroups about 200 organisations. Its main goal is to meet the cultural, social, educational and humanitarian needs of Muslims in France. The UOIF's activities are: financial and legal assistance for building or buying mosques, organisation of seminars, diffusion of practical information for Muslims (for example a prier calendar), summer camps for children and regional and national meetings such as the one at 'Le Bourget' in Paris, France. For further information: www.uoif-online.com.



agree'. This item corresponds with measuring personal relevance as a facet of involvement (Laurent & Kapferer, 1985), which basically acts as a motivational force in consumer decision-making. The measure of SN consisted of multiple items to assess the motivation to comply. They were phrased as 'To what extent do you take the encouragements to eat halal meat of the following people or institutions into consideration?' on a five-point scale from 'Not at all' to 'Very much' for partner, family, friends, religious authorities, children and the Islamic community in general (Conner & Sparks, 1996). Personal conviction was measured with the statement 'Eating halal meat is a personal choice' on a five point Likert scale ranging from 'totally disagree' to 'totally agree'. PBC was measured with the item 'How much control do you feel you have over eating halal meat' on a seven point scale ranging from 'No control' to 'Complete control' (Conner & Sparks, 1996). Perceived availability was measured using four items, pertaining both to product and information availability ('Halal products are readily available', 'There are a lot of choice possibilities in halal products', 'Information on halal labels is clear', 'There is sufficient information available on halal products') on a 5-point Likert scale ranging from 'totally disagree' to 'totally agree' (Vermeir & Verbeke, 2006). Also habit was measured on a five-point Likert scale from 'totally disagree' to 'totally agree' using the statement: 'Eating halal meat is something that I do without reasoning' (Verplanken & Orbell, 2003; Honkanen et al., 2005). Self-identity was measured using the statement 'I consider myself a Muslim' (Sparks & Shepherd, 1992; Phalet, Van Lotringen & Entzinger, 2000; Povey, Wellens and Conner, 2001; Robinson & Smith, 2002) on a five-point Likert scale ranging from 'totally disagree' to 'totally agree'. To assess dietary acculturation, respondents were asked to indicate their type of preferred food on a five-point scale ranging from 'French' (1) to 'Country of origin' (5) (Liou & Contento, 2001). This scale was reversed for further analysis, i.e. a high score indicates higher dietary acculturation in subsequent analyses. All items were measured through a 5 point scale, except for intention and control which were recoded to a 5 point scale for further analysis.
Finally, the questionnaire included relevant socio-demographics such as age, gender, nationality, origin, place of residence, level of education, occupation, marital status, and number and age of children.

### *4.1.2 Findings*

After editing and codification, the data were analysed using SPSS 12.0. Internal reliability consistency of the multi-item TPB concepts is assessed using Cronbach's alpha, factor analyses were performed, mean scores and standard deviations of all variables are reported. Further, the analysis includes independent samples' t-tests for comparison of means, linear correlation and multiple regressions to examine the determinants of halal meat consumption. The Cronbach's alpha value for 'motivation to comply' and 'perceived availability' was 0.91 and 0.80, respectively, and only one factor was extracted for both concepts individually in exploratory factor analysis. Behavioural intention, attitude, personal conviction, habit, control, self-identity and dietary acculturation were measured using single items.

The characteristics of the respondents presented in table 1 show that slightly more men (53.1%) than women (46.9%) completed the survey. In general, it seems like men are mainly responsible for meat purchases in North-African countries. 42% of the respondents declared that male and female are equally responsibly for meat purchases and 38% that mainly the husband is responsible. With respect to age, our sample consisted mainly of younger respondents (73.2% under 35 years of age) (Mean age = 31.1 years; SD=10.1) and relatively more single (54.4%) completed the survey compared to married or living together respondents (40.3%). Respondents originated mainly from Morocco (37.7%) and Algeria (32.6%), i.e. the two main migration populations in France. First generation, i.e. those migrates born abroad, compose 47% of the sample and second (those born in France or who came at or before the age of six years) or third generation account for 52% of the sample. Around two thirds of the respondents live in Paris and Paris suburb (Ile de France) while the rest reside in other French regions. A majority of respondents benefited from higher education: 37.4% have passed their Baccalaureat (seven years of secondary school, giving access to higher education) and 36.4% obtained a higher degree diploma. Only 26.1% have a diploma lower than Baccalaureat.

**Table 4-1** Socio-demographic characteristics of the French sample (% of respondents, n=576)

| | | | | | |
|---|---|---|---|---|---|
| Gender | Male | 53.1 | Origin | French | 4.2 |
| | Female | 46.9 | | Algerian | 32.6 |
| Age | ≤ 25 years | 37.3 | | Moroccan | 37.7 |
| | 26 – 35 years | 35.9 | | Tunisian | 11.6 |
| | 36 – 45 years | 16.5 | | African | 3.5 |
| | 46 – 55 years | 7.7 | | Other | 10.5 |
| | > 55 years | 2.6 | Generation | 1st generation | 47.8 |
| Region | Ile de France | 65.1 | | 2nd or 3rd generation | 52.2 |
| | Out of Ile de France | 34.9 | Education | No diploma | 6.9 |
| Family | Single | 54.4 | | Certificat BEPC/ brevet collège | 7.7 |
| | Married/ living together | 40.3 | | BEP CAP | 11.5 |
| | Divorced / widow | 5.3 | | BAC, BTS, BAC+2 | 37.5 |
| | | | | Licence Maîtrise, BAC+3 BAC+4 | 18.2 |
| | | | | DEA DESS PhD | 18.2 |





Table 2 presents the mean scores, standard deviations and correlations of the components included in the TPB. All mean scores are presented on a 5 point scale (1 to 5) and are positively scaled. In general, participants rate halal meat consumption as high in importance. We can expect that involvement is activated because the product (i.e. halal meat) is perceived as being instrumental in meeting important needs, goals and values (i.e. being a Muslim). In addition, our sample considers the opinion of others relatively important, while halal meat consumption is strongly considered to be a personal choice. Respondents believe that they have control over their own eating pattern but are significantly less convinced of the availability of halal meat (paired-samples $t(576)=10.04$; $p<0.001$). In addition, they do not consider halal meat consumption an automated process as indicated by their relative low score on the habit item. Finally, they predominantly consider themselves to be Muslims and they still prefer food from their country of origin compared to French cuisine.

**Table 4-2** Means, standard deviations (all on 5-point scales) and correlations for the measured constructs (n=567)

| | M | SD | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
|---|---|---|---|---|---|---|---|---|---|---|
| 1. Behavioural intention | 4.61 | 1.49 | - | | | | | | | |
| 2. Attitude | 4.76 | 0.66 | .209** | - | | | | | | |
| 3. Motivation to comply | 3.62 | 1.49 | .097* | .095* | - | | | | | |
| 4. Personal conviction | 4.19 | 1.41 | .053 | .068 | .036 | - | | | | |
| 5. Perceived control | 3.93 | 1.26 | .120** | .212** | .039 | -.018 | - | | | |
| 6. Perceived availability | 3.27 | 1.09 | .009 | .042 | .047 | -.049 | .175** | - | | |
| 7. Habit | 2.88 | 1.78 | .005 | -.059 | .097* | .282** | -.057 | .034 | - | |
| 8. Self-Identity | 4.83 | 0.51 | .017 | .259** | .063 | -.003 | .101* | .015 | .008 | - |
| 9. Dietary acculturation | 1.77 | 1.04 | -.099* | -.218** | -.146** | .034 | -.108* | .011 | .041 | -.053 |

It should be noted that in general, Muslims living in France tend to retain their original dietary behaviour (dietary acculturation score: M= 1.77) despite the sample average stay in France is 20.5 years (SD= 11.54) and 53% of the sample is born in France. Furthermore, the less dietary acculturated a person is, the more he or she intends to buy halal meat, the more importance one attaches to halal meat, the more one claims to be influenced by family, friends and religious institutions and the more personal control over eating halal meat is perceived. Self-identity is positively correlated with the importance attached to halal

meat on the one hand and the perception of control on the other hand. Independent samples' t-test also showed that especially first generation respondents consider themselves to be 'a Muslim' ($t(576)=-3.19$, $p<.01$). It is not clear though, whether second generation consider themselves less a Muslim or whether they are more severe in accepting themselves to be a good Muslim; for example, when one does not comply the five prayers a day he or she could not fully consider him- or herself to be 'a Muslim'.

Some interesting correlations are found between the TPB concepts and time of residence or the generation the individual belongs to. A significant correlation was found between generation and habit ($r=.129$, $p<.01$) and supported by an independent samples' t-test resulting in the second and third generation Muslims to rely more on habit when buying halal meat as compared to the first generation ($t(576)=4.13$, $p<.001$). Muslims born in France are also more convinced that eating halal meat is a strictly personal choice ($t(576)=5.38$, $p<.001$). Time of residence and acculturation are only slightly correlated ($r=.094$, $p<0.05$).

Finally, correlation analysis shows a significant positive correlation between intention and attitude, motivation to comply and control (Table 2). Personal conviction, habit and availability are not correlated with the intention to eat halal meat. The hypothesised determinants of intention are not totally independent. Attitudes are positively correlated with motivation to comply and control. A significant and positive correlation is, furthermore, found between motivation to comply and personal conviction on the one hand and habit on the other hand. In addition, perceived availability is positively correlated with the perception of control. Despite being significant, the correlations between the hypothesised determinants of intention are relatively low, hence not imposing limitations from eventual multicollinearity in further regression analysis.

### Determinants of behavioural intention – total sample

Several stepwise multiple regression models were tested. First, a model is regressed with the three classical determinants of intention, more specifically attitude, SN (distinguishing between motivation to comply and personal conviction), PBC measured as control and perceived availability, and habit. Next, regression model results are compared for individuals with low versus high levels of self-identity (hypothesis 1) and low versus high dietary acculturation (hypothesis 2). Estimates and goodness of fit statistics are presented in Table 3.



**Table 4-3** Multiple regression predicting intention to consume halal meat, for the total sample (n=576) and different levels of self-identity and dietary acculturation

| | **Total sample** | | **Self-identity** | | | | **Dietary acculturation** | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | **Low** | | **High** | | **Low** | | **High** | |
| | $R^2$ .062 | | $R^2$ .236 | | $R^2$ .045 | | $R^2$ .027 | | $R^2$ .113 | |
| | β | p | β | p | β | p | β | p | β | p |
| **Attitude** | **.182** | **.001** | **.330** | **.010** | **.151** | **.002** | **.108** | **.063** | **.209** | **.005** |
| **Subjective norm** | | | | | | | | | | |
| - Motivation to comply | **.080** | **.069** | .012 | .920 | **.083** | **.080** | .081 | .168 | .077 | .276 |
| - Personal conviction | .044 | .334 | **.295** | **.032** | .017 | .727 | .011 | .861 | .103 | .174 |
| **Perceived behavioural control** | | | | | | | | | | |
| - Perceived control | **.091** | **.044** | .168 | .191 | **.088** | **.071** | .050 | .396 | **.152** | **.035** |
| - Perceived availability | -.010 | .821 | -.034 | .784 | - 013 | .785 | -.010 | .863 | .003 | .962 |
| **Habit** | .002 | .963 | - .147 | .275 | .017 | .727 | .057 | .347 | - 074 | .311 |

For the total sample, attitude towards halal meat, motivation to comply, and perceived control are significant predictors of intention, while personal conviction, perceived availability and habit are not significant. Thus, perceived availability does not turn out to be a barrier to consume halal meat for Muslims living in France. In addition, habit or the degree to which one eats halal meat as an automated process seems to have no influence on intention to eat halal meat. Nor seems halal meat consumption determined by personal conviction. The classical determinants (attitude, social norm and perceived control) are thus significant for intention to consume halal meat. Nevertheless, it should be noted that the resulting coefficient estimates (ranging from 0.08 to 0.19) and the explained variance ($R^2=0.06$) are rather low as compared with previous research on food consumption using the TPB framework. We will return to this issue later.

### Role of religious self-identity (hypothesis 1)

Next, we looked at the possible differential predictive value of the TPB components depending on the level of individual's self-identity. Respondents were classified in two self-identity categories using median split (low, high) (e.g. Ward & Kennedy, 1994; Ward &

Rana-Deuba, 1999; Eyou, Adair & Dixon, 2000; Farver, Bhadha & Narang, 2002). The intentions of Muslims with a low self-identity ($R^2$=0.236) are determined by their personal attitude towards halal meat consumption and by their personal conviction. However, for Muslims with a high self-identity, intentions are influenced by attitude, motivation to comply and perceived control. In other words, both consumers who consider themselves to be more or less Muslim are primarily guided by the importance personally attached to halal meat. Furthermore, consumers who consider themselves less as being a Muslim, believe that their consumption decision is a matter of personal conviction, while consumers with a higher Muslim identity are more prone to take the opinion of other important persons and institutions into account (in addition to their feeling of control). More (versus less) 'religious' consumers are more sensitive to the norms and rules prescribed by their religion, while less (versus more) 'religious' consumers make more 'egocentric' (i.e. considering one's own opinion instead of other one's opinions) consumption decisions. Our hypothesis that the degree to which a consumer considers him- or herself a Muslim influences the decision making process for halal meat is confirmed. Furthermore, we hypothesised that the lower the self-identification with Islam, the better the predictiveness of intention to eat halal meat. Indeed, the proportion of explained variance in intention is highest for low self-identity consumers ($R^2$= .236), herewith yielding the best performing TPB model of our analyses.

Role of dietary acculturation (hypothesis 2)

After classifying respondents in two dietary acculturation using median split (low, high), results show that only attitude towards halal meat consumption predicts intentions for low dietary acculturated consumers ($R^2$=0.027), while high acculturated consumers' intentions are predicted by perceived control in addition to attitude ($R^2$=0.113) (Table 3). Low acculturated Muslims' meat consumption decisions are solely influenced by the personal relevance or importance attached to halal meat. In contrast, more dietary acculturated Muslims' intention to consume halal meat are also determined by the control they feel to have over eating halal meat. With these findings we can confirm our hypothesis that dietary acculturation influences the predictive power of the TPB components; the predictiveness of behavioural intention improves with the degree of dietary acculturation. Motivation to comply did not influence behavioural intentions for both high and low acculturated consumers. Furthermore, the non significance of habit and perceived availability could possibly be explained by the reasoned or highly important character of halal meat consumption (see before), independent of the level of dietary acculturation in the host culture.



## 4.2 Main study in Belgium

### *4.2.1 Introduction*

After the French pilot study in 2005, a first study investigating the determinants of halal meat consumption in general and a first application of the TPB for halal meat consumption decision, the models' constructs and the questionnaires' items were refined in order to increase the predictive power of the model. The study was then repeated using the improved questionnaire within a Belgian sample in 2006 so that results from both samples give us more generalization power to the broader Muslim population in Western Europe. Table 4 presents an overview of the constructs and its items for both studies. For most constructs; except for intention, SN (motivation to comply) and availability; the number of items measuring the construct has been increased in the Belgian study. Additionally, the variables behaviour and perceived barriers were added to the Belgian TPB.

**Table 4-4** Number of items for the measured constructs in French and Belgian study

| Construct | French study<br>Numer of items | Belgian study<br>Number of items |
|---|---|---|
| Behaviour | - | 1 |
| Intention | 1 | 1 |
| Atitude | 1 | 14 |
| Subjective norm | 6 | 6 |
| Personal conviction | 1 | - |
| Perceived behavioural control | | |
| - control | 1 | 2 |
| - availability | 4 | 4 |
| - barriers | - | 6 |
| Habit | 1 | 5 |
| Self-identity | 1 | 3 |
| Acculturation | 1 | 11 |

In the following paragraph the methodology used for the Belgian sample and the findings are presented. Next, results from both studies will be jointly discussed. Finally, the chapter ends with a conclusion from both studies.

### *4.2.2 Materials and method*

Cross-sectional data were collected through a survey in Belgium during Summer 2006. All respondents were halal meat consumers. Recruitment was based on a snowball sampling technique starting from friends and acquaintances and increasing through friends and family of the initial contact persons. Furthermore, owners of ethnic food shops and their family, as well as workers of socio-cultural organisations and their members were asked to participate

in the study. In parallel, a web survey using the same questionnaire was developed. The snowball sampling technique was also used through e-mail and announcements were placed on relevant websites and web fora. According to De Pelsmacker and Van Kenhove (2002: 104), snowball sampling is recommended in cases where respondents are difficult to reach, which is the case for Muslim consumers in Belgium. In total, 367 surveys were completed of which 175 were obtained as a result of the snowball sampling and 192 via electronic contact. All questionnaires were self-administered by the respondent, hence avoiding potential bias from an interviewer.

The survey used a structured questionnaire in Dutch and French, which was pre-tested and refined prior to field work. The questionnaire included items measuring the components of the proposed model of the TPB. Behaviour was measured by asking 'How many times a week do you eat halal meat' on a six point frequency scale ranging from 'never' to 'every day'. Behavioural intention was measured on an eight-point scale (ranging from 0 to 7) by asking 'How many times do you intend to eat halal meat in the next seven days, today included'. Attitude was measured through 14 agreement statements related to health, taste, price, safety, animal welfare, and quality on five-point scales ranging from 'totally disagree' to 'totally agree'. The measure of SN consisted of multiple items to assess the motivation to comply. The items were phrased as 'To what extent do you take the encouragements to eat halal meat of the following people or institutions into consideration?' on a five-point scale from 'Not at all' to 'Very much' for partner, family in the country of origin, family in the host country, friends, religious authorities, children and the Islamic community in general. PBC was measured with 3 items. The items read 'How much control do you feel you have over eating halal meat' on a five point scale ranging from 'No control' to 'Complete control'; 'For me, eating halal meat is …' on a five point scale from 'Very difficult' to 'Very easy' and 'If I would, I could easily buy halal meat tomorrow' on a five point scale from 'Totally improbable' to 'Totally probable'. Six items were used to assess possible barriers for consuming halal meat pertaining to price, availability, lack of time, lack of control, lack of information and hygiene. All items were measured through a five point scale ranging from 'Totally no reason' to 'Very much a reason' for not consuming halal meat. Furthermore, perceived availability was measured using four items, pertaining both to product and information availability ('Halal products are readily available', 'There is a lot of choice in halal products', 'Information on halal labels is clear', 'There is sufficient information available on halal products') on a 5-point Likert scale ranging from 'Totally disagree' to 'totally agree'. Also habit was measured on a five-point Likert scale from 'Totally disagree' to 'Totally agree' using the statements: 'Eating halal meat is something that I do without reasoning', 'Eating halal meat is something I do frequently' and 'Eating halal meat is something I do without having to consciously remember, 'Eating halal meat is something I feel weird If I don't do it', and 'Eating halal meat is something I don't have to think about doing it'.

Finally, the questionnaire measured socio-cultural (acculturation and self-identity) and individual characteristics of the respondents. Self-identity was measured using the statements 'I consider myself a Muslim', 'I consider myself a good Muslim' and 'I consider myself a practising Muslim' on a five-point Likert scale ranging from 'totally disagree' to 'totally agree'. Individual characteristics such as age, gender, origin, generation, place of



residence, level of education, occupation, marital status, and number of children were also included. To assess acculturation, 11 items were used for measuring dietary acculturation, ethnic social relations, language use, and media use. A five-point scale ranging from 'Totally Maghrebian' (1) to 'Totally Belgian' (5) was used.

### *4.2.3 Findings*

The data were analysed using SPSS 12.0. Mean scores and standard deviations of all variables are reported. Internal reliability consistency of the multi-item TPB constructs was assessed using Cronbach's alpha. Factor analyses were performed. Analyses include independent samples' t-tests for comparison of means, linear correlation and multiple regressions to examine the determinants of halal meat consumption.

Sample characteristics

Table 5 presents the sample characteristics. Slightly more women (55.6%) than men (44.4%) participated in the survey. With respect to age, the sample consisted of mainly younger respondents (80.1% under 35 years) (M= 29.3 years; SD= 8.1). A small but significant difference in mean age between the pen and paper sample (mean age= 30.6 years; SD= 9.4) and the internet sample (M= 28.2 years; SD= 6.5) was found. Most likely, language and educational barriers among elderly immigrants have led to a relatively young sample. Most respondents originate from Morocco (86.3%), which is in line with the main Muslim population origin in Belgium. First generation Muslims (i.e. those born abroad) compose 16.8% of the sample and second generation (i.e. those born in Belgium or who came at or before the age of six years) account for 83.2% of the sample. The participants who completed the web-based questionnaire were significantly higher educated ($\chi^2$= 37.44, p< 0.001) and belonged significantly more to the second generation of Muslim consumers ($\chi^2$= 32.21, p<0.001). Although no socio-demographic data on the Belgian Muslim population are available, it is assumed that there is an over representation in the sample of younger and higher educated respondents, which places some limits on generalisations to the broader Muslim population.

**Table 4-5** Socio-demographic characteristics of the Belgian sample (n=367)

| | | | | | |
|---|---|---|---|---|---|
| Gender | Male | 44.4 | Origin | Moroccan | 86.3 |
| | Female | 55.6 | | Algerian | 1.6 |
| Age | ≤ 25 years | 36.2 | | Tunisian | 1.4 |
| | 26 – 35 years | 43.9 | | Other | 10.7 |
| | 36 – 45 years | 13.4 | Education | Primary school | 5.5 |
| | 46 – 55 years | 4.9 | | High school | 34.8 |
| | > 55 years | 1.6 | | Bachelor | 33.4 |
| Family | Single | 41.4 | | Master | 22.9 |
| | Married / living together | 55.3 | | Master/ PhD | 3.3 |
| | Divorced / widow | 3.3 | Generation | First generation | 16.8 |
| | | | | Second or third generation | 83.2 |

Descriptive statistics

Table 6 presents the mean scores and standard deviation of the components included in the TPB. In general, Muslim consumers feel positive about halal meat consumption and tend to comply with family and friends as much as with religious leaders and the Muslim community to eat halal meat. Muslims control their halal meat consumption partly due to a positive perceived availability of halal meat products. Practical barriers such as price, availability, and lack of time do not strongly restrain them from eating halal meat. Nevertheless, for some Muslims issues related to the safety of halal meat could form consumption barriers.

The acculturation score of the respondents varies strongly around a rather neutral mean (M= 3.18, SD=1.15). However, with respect to dietary acculturation, the results show that Muslims have a tendency to retain their dietary behaviour (dietary acculturation score: M= 2.25, SD=.69), despite the fact that 82% of the sample is born in Belgium and those born in North-Africa already reside in Belgium for 16.7 years on average (SD= 10.6). With respect to self-identity, results show that respondents strongly see themselves as Muslims (self-identity score: M= 4.29, SD=0.7). After splitting the sample into groups using median-split with low versus high acculturation, a t-test reveals that higher acculturation associates with a lower identification with Islam ($t(367)= 4.34$; $p<0.01$). However, no significant linear correlation is found between self-identity and acculturation.

Independent samples' t-tests between the pen and paper and the internet sample for all TPB components only revealed a significantly higher internal motivation to comply for the pen and paper sample (M= 4.06, SD= 1.00) compared to the internet sample (M= 3.77, SD= 1.18). Hence, the pen and paper and web-based samples can largely be considered as comparable, and therefore both samples will be pooled for statistical analysis.



**Table 4-6** Cronbach's alpha, means scores (on 5-point scales) and standard deviations for the measured constructs

| | Number of items | Cronbach's alpha | M | SD |
|---|---|---|---|---|
| 1. Behaviour | 1 | | 3.27 | 1.17 |
| 2. Behavioural intention | 1 | | 4.52 | 1.95 |
| 3. Attitude | 14 | .87 | 4.10 | .58 |
| - Price | 3 | .64 | 3.77 | .81 |
| - Health | 4 | .71 | 4.18 | .71 |
| - Safety | 3 | .84 | 4.34 | 1.18 |
| - Quality | 2 | .71 | 4.30 | 1.16 |
| - Animal welfare | 1 | | 4.53 | .91 |
| - Taste | 1 | | 4.46 | .86 |
| 4. Motivation to comply | 6 | | | |
| - Internal | 4 | .89 | 3.90 | 1.27 |
| - External | 2 | .92 | 3.91 | 1.11 |
| 5. PBC | 2 | .71 | 4.56 | .72 |
| 6. Barriers | 6 | | | |
| - Practical | 3 | .77 | 1.48 | .88 |
| - Safety | 3 | .89 | 2.26 | 1.42 |
| 7. Availability | 4 | .81 | 3.55 | 1.01 |
| 8. Habit | 5 | .76 | 4.07 | 1.00 |
| 9. Self-identity | 3 | .75 | 4.29 | .70 |
| 10. Acculturation | 11 | .74 | 3.18 | 1.16 |

Correlation analysis (Table 7) shows a significant positive correlation between intention and attitude, in particular the taste (r=0.169, p<.01) and health (r=0.268, p<.01) attitude factors (data not included in table 7). Intention is also found to be positively correlated with external motivation to comply, perceived control; perceived availability; and self-identity. A negative correlation is found between safety barriers and intention. Internal motivation to comply, practical barriers, habit, and acculturation are not correlated with the intention to eat halal meat, and neither with behaviour, except for habit (r=0.155, p<.01) and acculturation (r=-.183, p<.01). Intention and behaviour are, furthermore, strongly correlated (r=0.637, p<.01). Finally, attitude, external motivation to comply, PBC, perceived availability, and self-identity are also positively correlated with halal meat consumption.



**Table 4-7** Pearson correlation coefficients for the measured constructs (n=367)

| | 1 | 2 | 3 | 4.1 | 4.2 | 5 | 6 | 7.1 | 7.2 | 8 | 9 | 10 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1. Behaviour | - | | | | | | | | | | | |
| 2. Intention | .637** | - | | | | | | | | | | |
| 3. Attitude | .165** | .167** | - | | | | | | | | | |
| 4. Motivation to comply | | | | | | | | | | | | |
| - Internal | .069 | .068 | .173** | - | | | | | | | | |
| - External | .114* | .110* | .125* | | | | | | | | | |
| 5. Perceived control | .241** | .208** | .324** | .151** | .127* | - | | | | | | |
| 6. Perceived availability | .152** | .219** | .397** | .173** | .123* | .482** | - | | | | | |
| 7. Perceived barriers | | | | | | | | | | | | |
| - Practical barriers | -.067 | -.084 | -.284** | .011 | .004 | -.243** | -.220** | - | | | | |
| - Safety barriers | -.181** | -.234** | -.233** | -.047 | -.036 | -.258** | -.228** | | | | | |
| 8. Habit | .155** | .096 | .191** | .142** | .093 | .171** | .126* | -.157** | -.118* | - | | |
| 9. Self-Identity | .200** | .143** | .292** | .191** | .147** | .242** | .284** | -.128* | -.208** | .216** | - | |
| 10. Acculturation | -.183** | -.094 | -.101 | -.111* | -.113* | -.077 | -.061 | .015 | .015 | -.054 | -.062 | - |

Determinants of behavioural intention – total sample

Several stepwise multiple regression models were tested. First, a model is regressed with the three classical determinants of intention, more specifically attitude; SN (motivation to comply); PBC measured as control, perceived availability, and practical and safety barriers; and habit. Next, regression model results are compared for individuals with low versus high acculturation (hypothesis 1) and low versus high levels of self-identity (hypothesis 2). Estimates and goodness of fit statistics are presented in Table 8.

For the total sample, attitude towards the wholesomeness of halal meat and safety barriers are significant predictors of intention. Thus, Muslim consumers' perceptions of halal meat as being healthy meat and concerns about the safety of halal meat influence or restrain their intention to eat halal meat. Furthermore, habit (i.e. the degree to which one eats halal meat as an automated process), compliance with the encouragements of peers to eat halal meat, control over consuming halal meat and perceived availability do not influence the intention to consume halal meat. It should be noted that the resulting coefficient estimates (ranging from 0.15 to 0.21) and the explained variance ($R^2$=0.086) are rather low as compared with previous studies on food consumption using the TPB framework. We will return to this issue later.

With respect to behaviour, intention towards consuming halal meat, self-identity and acculturation influence the consumption of halal meat. The more one sees him or herself as a Muslim and the less one is acculturated, the more he or she will eat halal meat.

Role of acculturation (hypothesis 1)

Next, the possible differential predictive value of the TPB components depending on the level of individual's acculturation was investigated. Respondents were classified in two acculturation categories using median split (low, high). Results show that, for low acculturated consumers, only health attitude predicts intentions ($R^2$=0.024), while high acculturated consumers' intentions are negatively influenced by safety barriers and attitude towards animal welfare in addition to a positive impact of health attitude ($R^2$=0.181) (Table 8). Low acculturated Muslims' meat consumption decisions are solely influenced by the perception that halal meat is healthy meat. In contrast, it seems that the stronger high acculturated Muslim consumers' concerns with respect to animal welfare or safety issues, the stronger their refrain from halal meat consumption intention.

Finally, behaviour is only predicted by intention to consume halal meat for low acculturated Muslims ($R^2$=0.426). In contrast, self-identity also influences the consumption of halal meat for high acculturated Muslims in addition to their intention ($R^2$=0.455). With these findings, the hypothesis that the predictiveness of behavioural intention improves with the degree of acculturation can be confirmed.



**Table 4-8** Multiple stepwise regression for behavioural intention and behaviour, total sample (n=367), and for different levels of acculturation and self-identity

| | **Total Sample** | | **Acculturation** | | | | **Self-Identity** | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| **Intention** | | | **Low** | | **High** | | **Low** | | **High** | |
| | $R^2$ .086 | | $R^2$ .024 | | $R^2$ .181 | | $R^2$ .211 | | $R^2$ .034 | |
| | β | P value | B | P value | β | P value | β | P value | β | P value |
| Attitude | | | | | | | | | | |
| - health | **.213** | **.000** | **.155** | **.047** | **.373** | **.000** | **.305** | **.004** | **.183** | **.008** |
| - animal welfare | -.026 | .652 | .023 | .777 | **-.246** | **.014** | **-.229** | **.025** | .076 | .286 |
| Motivation to comply | | | | | | | | | | |
| - Intern | .011 | .845 | -.105 | .176 | .095 | .256 | .118 | .284 | -.085 | .217 |
| - Extern | .048 | .371 | -.022 | .779 | **.139** | **.095** | **.226** | **.011** | -.038 | .586 |
| Perceived behavioural control | | | | | | | | | | |
| - Control | .080 | .160 | .080 | .339 | .093 | .277 | .051 | .593 | .068 | .340 |
| - Availability | .075 | .189 | .076 | .378 | .087 | .312 | **.217** | **.015** | -.012 | .867 |
| - Practical barriers | .101 | .098 | .083 | .299 | -.035 | .721 | .009 | .923 | .015 | .828 |
| - Safety barriers | **-.154** | **.005** | -.166 | .138 | **-.249** | **.005** | -.129 | .185 | -.114 | .097 |
| Habit | .041 | .450 | .041 | .604 | .107 | .226 | .094 | .319 | -.019 | .785 |
| | **Total Sample** | | **Acculturation** | | | | **Self-Identity** | | | |
| **Behaviour** | | | **Low** | | **High** | | **Low** | | **High** | |
| | $R^2$ .431 | | $R^2$ .426 | | $R^2$ .455 | | $R^2$ .410 | | $R^2$ .426 | |
| | β | P value | β | P value | β | P value | β | P value | β | P value |
| Intention | **.613** | **.000** | **.654** | **.000** | **.585** | **.000** | **.640** | **.000** | **.638** | **.000** |
| Self-identity | **.117** | **.009** | .006 | .921 | **.195** | **.008** | - | - | - | - |
| Acculturation | **-.097** | **.026** | - | - | - | - | -.140 | .977 | **-.117** | **.040** |

Role of religious self-identity (hypothesis 2)

In the next step of the analysis, respondents were classified in two self-identity categories using median split (low, high). Both consumers who consider themselves to be more ($R^2$=0.034) or less ($R^2$=0.211) Muslim are guided by their health attitude when intending to consume halal meat. Furthermore, consumers with a lower Muslim identity also consider the opinion of religious persons or institutions, their personal animal welfare attitudes, and perceived availability of halal meat. Halal meat consumption is influenced by intention for both high ($R^2$=0.426) and low ($R^2$=0.455) self-identity Muslims, while acculturation determines halal meat consumption for high self-identity Muslim consumers (Table 8).
Our hypothesis that the degree to which a consumer considers him- or herself a Muslim influences the decision making process for halal meat is confirmed. Furthermore, we hypothesised that the lower the self-identification with Islam, the better the predictiveness of intention to eat halal meat. Indeed, the proportion of explained variance in intention is highest for low self-identity consumers ($R^2$= .211), herewith yielding the best performing TPB model of our analyses.

## 5 Discussion

This study shows that in general in France, a positive attitude towards halal meat, the influence of peers and the perceived control over consuming halal meat determine halal meat consumption. In Belgium, a positive attitude towards the wholesomeness of halal meat in specific and safety barriers seem to influence halal meat consumption. In both countries, perceived availability of halal meat does not seem to be a barrier for consuming halal meat in contrast with Verbeke and Lopez (2005) who found that lack of ethnic ingredients is a possible barrier for immigrants to retain their eating habits. Possibly, the importance or personal relevance attached to halal meat (which is high in our sample given the specific religious context) dominates over preference for convenient, readily or easily available food products. Consumers who are highly involved with a product perceive the availability of a product less as a potential barrier for behaviour, and might be willing to devote more time and effort on obtaining their desired product. This has yet been shown for instance in the case of sustainable food consumption decisions (Vermeir & Verbeke, 2006) and can be confirmed by the qualitative research which concluded that Muslims are willing to put considerable effort in obtaining halal meat (Bonne & Verbeke, 2006). In addition could an improved availability of halal food products the last 10 years in France (Bergeaud-Backler & Bonne, 2007) also explain the non significance of perceived availability in France in specific.
Halal meat consumption is, furthermore, in contrast with what was presumed after the first qualitative research, not strongly driven by habitual behaviour. In accordance with non-halal or regular meat consumption decisions in Belgium (Verbeke & Vackier, 2004), our Belgium sample in contrast with the French sample, agrees with the statement that eating halal meat is a rather automatic, habitual process (i.e. without a high degree of active reasoning).



However, habit seems not to influence the intention to consume halal meat. Probably, both consumers with high as well as low intentions to eat halal meat consider halal meat consumption as well thought over process which can explain the non significance of habit.
Adding self-identity and acculturation to investigate the role of religion within a migration context within the model by splitting the group into consumers with low self-identity versus high self-identity and low acculturation versus high acculturation leads us in both countries to different models in the four groups with low self-identifying Muslims and highly acculturated Muslims displaying the best TPB models.
In general, Muslims report a slightly positive acculturation score; however, Muslims in France and Belgium tend to retain their dietary habits despite a relative long stay in the host country confirming Park et al (2003) who reported that food habits may change most slowly when individuals migrate to other cultures. This finding also corroborates Liou and Contento (2001) who reported a low dietary acculturation score among Chinese Americans. Time of residence and dietary acculturation are slightly correlated meaning that the longer someone lives in the host country, the more he becomes dietary acculturated, corroborating Verbeke and Lopez (2005). Contrary to Liou and Contento (2001), no significant negative correlation was found between acculturation and habit. Nevertheless, we did find halal meat consumption to be more habitual among second generation Muslims as suggested by previous research (Bonne & Verbeke, 2006). Splitting the total sample in groups with different acculturation degrees showed that French low acculturated Muslims rely completely on their positive attitude towards halal meat whereas high dietary acculturated French Muslims rely on attitude and perceived control. In Belgium we found that the more a Muslim is acculturated, the more halal eating becomes a matter of health attitude, animal welfare concerns and safety consumption. These findings corroborate with previous research which concluded that next to faith and respect for animal welfare, health is the main motivator for eating halal meat among Muslim consumers (Bonne & Verbeke, 2006). Cohen et al. (2002) also found that although there is no evidence to support the notion that kosher foods are safer, consumers still adhere to their belief that kosher products are safer than their counterparts. Moreover, these results could suggest that animal welfare concerns prevent highly acculturated and low self-identifying Muslim consumers from eating halal meat, which would be in line with findings reported from non-Muslim consumers (Verbeke & Viaene, 2000). Nevertheless, we did not find SN to influence behavioural intentions for both high and low acculturated consumers unlike Liou and Contento (2001) and Stodolska and Livengood (2006) who found that strong pressure from fellow members provided additional incentives to Muslim immigrants in the US to retain their traditional culture. Finally, the more a Muslim is acculturated, the better the predictive power of the TPB components as concluded also in the study of Liou and Contento (2001) within a Chinese-American sample.
With respect to self identification with Islam, Muslims have a relative high self-identification score in France and Belgium. These findings are in line with Navas et al (2007) who found that Maghrebi immigrants prefer to maintain their religious beliefs and customs and their ways of thinking (values and principles). Splitting the total sample in groups with different degrees of self-identity showed that the less a French Muslim identifies himself with Islam,

the more eating halal meat becomes a personal conviction without being influenced by others and despite religious prescriptions. Although Islam prescribes meat consumption to be halal, it remains individual's own personal choice to eat halal or not. Those consumers, especially Muslims of second or third generation, do not follow blindly the dietary rules but they make a well thought over decision. Once this decision is made, halal meat consumption can become habitual: they do not have to repeat thorough active reasoning for every purchase or consumption decision. This finding explains the tendency of habitual behaviour among second generation in exploratory research. A strong personal conviction for consuming halal meat among young Muslims also corroborates Bergeaud-Blacler (2006) who declares that eating halal is an expression of a rising Islamic attitude towards foods or clothing among young Muslims in France. Eating halal has become a means for an Islamic devotion and a sign of an identity reserved to the Muslim community (Bergeaud-Blackler, 2006). For the Belgian sample we found that less self-identifying Muslim consumers not only rely on a positive attitude but also on the meanings of peers and the perceived availability. Easy available halal meat products are thus important for them and probably these consumes are susceptible to marketing activities of retailers offering a selected assortment of halal meat. Nevertheless, taking into account the opinion of other Muslims, these consumers could be influenced by religious spokespersons to adapt their dietary patterns for example not to consume certain foods or not to trust certain halal labels, which has been the case for halal meat of Albert Heijn, a Dutch food retailer.

## 6 Conclusions

The purpose of this study was twofold. First, the TPB was used to investigate halal food consumption in France and Belgium. In general, the classical TPB determinants of intention explain only little variance in intention to consume halal meat and the regression coefficients are low compared to other food choice studies using the TPB. Apparently, the consumption of halal meat for Muslims is quite different from the consumption of 'regular' meat or other foods for non-Muslims. The religious associations attached to halal meat probably make this decision more important for the Muslim consumer, which could lead to a different decision-making process, including a specific set of predictors. Therefore, and second, we added two determinants that are associated with food decisions within a religion and migration context (i.e. self-identity and acculturation) that could help us better understand the concept of religious meat consumption decisions.

We conclude that in France a positive attitude towards halal meat, the influence of peers and the perceived control over consuming halal meat determine halal meat consumption. In Belgium, a positive attitude towards the wholesomeness of halal meat in specific and safety barriers seem to influence halal meat consumption. Barriers related to meat safety negatively influence intention to eat halal meat which is consistent with our findings that health is an important motivator for consuming halal meat.

In both countries, perceived availability of halal meat does not seem to be a barrier for consuming halal meat, neither is consumption, in contrast with what was presumed after the



first qualitative research, strongly driven by habitual behaviour. Possibly, the importance or personal relevance attached to halal meat (which is high in our sample given the specific religious context) dominates over preference for convenient, readily or easily available food products. In addition could an improved availability of halal food products the last 10 years in France also explain the non significance of perceived availability in France in specific.

Adding self-identity to measure the role of religion and acculturation to investigate the role of religion within a migration context within the model by splitting the group into consumers with low self-identity versus high self-identity and low acculturation versus high acculturation leads us in both countries to different models in the four groups with low self-identifying Muslims and highly acculturated Muslims displaying the best TPB models. In general, Muslims report a slightly positive acculturation score; however, Muslims in France and Belgium tend to retain their dietary habits despite a relative long stay in the respective host country. Splitting the total sample in groups with different acculturation degrees showed that French low dietary acculturated Muslims rely completely on their positive attitude towards halal meat whereas high dietary acculturated French Muslims rely on attitude and perceived control. In Belgium we found that the more a Muslim is acculturated, the more halal eating becomes a matter of health attitude, animal welfare concerns and safety consumption barriers confirming results from qualitative research that halal meat is perceived as being healthy and respecting animal welfare concerns. However, here we could explain the findings that actual practices with respect to animal welfare prevent highly acculturated, and also low self-identifying Muslims, from eating halal meat, which could be in line with findings reported from non-Muslim consumers.

With respect to self identification with Islam, Muslims have a relative high self-identification score in France and Belgium. Splitting the total sample in groups with different degrees of self-identity showed that the less a French Muslim identifies himself with Islam, the more eating halal meat becomes a personal conviction without being influenced by others and despite religious prescriptions. Although Islam prescribes meat consumption to be halal, it remains individual's own personal choice to eat halal or not. Those consumers, especially Muslims of second or third generation, do not follow blindly the dietary rules but they make a well thought over decision. Once this decision is made, halal meat consumption can become habitual (see a positive correlation between personal conviction and habit): they do not have to repeat thorough active reasoning for every purchase or consumption decision. This finding explains the tendency of habitual behaviour among second generation in the exploratory research. A strong personal conviction for consuming halal meat among young Muslims also corroborates Bergeaud-Blacler (2006) who declares that eating halal is an expression of a rising Islamic attitude towards foods or clothing among young Muslims in France. For the Belgian sample we found that less self-identifying Muslim consumers not only rely on a positive attitude but also on the meanings of peers and the perceived availability. Easy available halal meat products are thus important for them and probably these consumes are susceptible to marketing activities of retailers offering a selected assortment of halal meat.

Our research has some practical implications. First of all, our results show that the decision-making process that precedes halal consumption is different from regular meat consumption

decision-making processes. Consequently, different marketing techniques should be used to stimulate halal meat versus regular meat consumption. For example, communication strategies for halal meat could stress the perceived health characteristic of halal meat on one hand and safety concerns from Muslim consumers on the other hand. In addition, different 'decision' segments exist within the halal market (i.e. segments that base their decision on different variables). French Muslims with a low Muslim identity can be motivated through communications to buy halal meat by slogans that focus on the individual's opportunity to makes his/her own choice while Muslims with a high Muslim self-Identity would be more appealed by messages focussing on the social importance of consuming halal on the one hand and the control consumers have over attaining halal meat on the other hand. In addition, the halal food consumption of high acculturated Muslims could also benefit from enhancing control feelings. In Belgium, however, Muslims with a low Muslim identity can be motivated through communications to buy halal meat by messages appealing to the social importance of consuming halal on the one hand and the high availability and respect for animal welfare on the other hand.

On the downside, the rather low regression scores are a bit disappointing but give us an idea of which variables are important in understanding and predicting halal meat consumption. Several methodological, conceptualisation and operationalisation issues could explain the rather low regression coefficients. Possibly, the behaviour under investigation (i.e. halal food consumption) is a sensitive subject for the respondents because of its religious association. Research on a less sensitive issue, such as job search behaviour, with a similar respondent group in The Netherlands (Van Hooft et al., 2006) resulted in higher regression coefficients of the TPB variables denoting that the low regression coefficients in our study might have been caused by the topic of the study and not necessarily by the nature of the specific population itself. Recently, TPB has been successfully tested in a Saudi Arabian sample concerning the effects of age and gender on new technology implementation (Baker et al., 2007). Malhotra and McCort (2001), furthermore, concluded that the Theory of Reasoned Action (from which the TPB is an extension) could be used in a non-western sample taking cultural sensitive constructs and/or measures into account. Van Hemert et al. (2001) also suggested that when comparing ethnic groups or groups with different levels of acculturation in research, a pilot study on the cultural bias of the items should be performed using two versions per item reflecting two different cultural backgrounds and testing their structural equivalence. This has not specifically been done for this study, which could possibly explain why the best TPB models in this and similar previous research (Bonne et al., 2007) are found for highly acculturated and low self-identifying Muslim consumers.

This study also faces some limitations to the methodology used. We opted for including a number of potential determinants of halal meat consumption, but other characteristics could also have been considered (in addition to the items in the present study), such as trust (Stefani et al., 2008), moral obligation (Shepherd, 1999), involvement or values (Vermeir & Verbeke, 2006), past behaviour (Smith et al., 2007), or social identity (Thorbjørnsen et al., 2007), thus possibly improving the predictive power of the TPB model. Future research could investigate other individual characteristics that are important in religious food



decisions. Furthermore, in the French sample only, several constructs were measured as single items instead of multi-item constructs. In addition, it might be possible that the phrasing of some of our statements is responsible for the low regression coefficients (e.g. motivation to comply). In hindsight, because of the sensitive, religious, nature of the topic, some questions like social or subjective norms, personal norms and personal relevance could be asked more indirectly. Finally, the sample was taken from France and Belgium only; respondents were selected using convenience and snowball sampling; and they were contacted during a specific event in France. Each of these issues imposes limits on drawing generalisation from our findings to the broader Muslim migrant population living in Western European countries. Nevertheless, our findings shed some initial lights on the validity of the TPB, extended with religious self-identify and acculturation, for explaining halal meat consumption decisions among the immigrant Muslim population in Belgium and France.

Practical implications extend to food policy decision-makers and food marketers who might pursue identity- and/or acculturation-related strategies in their distribution and communication efforts targeted at the growing halal food market segment in Western Europe.

# Chapter 5

## CONSUMER TRUST IN HALAL MEAT STATUS AND CONTROL IN BELGIUM

## Abstract

This chapter focuses on public trust of Belgian Muslims in information sources of halal meat and their confidence in key actors and institutions for monitoring and controlling the halal meat chain. Cross-sectional consumer data were collected through a survey with 367 Muslims during the summer of 2006 in Belgium. Findings reveal that Islamic institutions and especially the Islamic butcher receive in general most confidence for monitoring and controlling the halal status of meat, and for communicating about halal meat. However, based on Muslims' confidence, four distinct market segments were identified: Indifferent (29.1%), Concerned (9.7%), Confident (33.1%) and Islamic idealist (26.7%). These segments differ significantly with respect to trust in information sources and institutions, health and safety perception of halal meat, perceived halal meat consumption barriers, behavioural variables (halal meat consumption frequency and place of purchase), and socio-cultural (acculturation and self-identity) and individual characteristics. Indifferent consumers are rather undecided about who should monitor the halal status of meat, and they are most open to purchasing halal meat in the supermarket. Concerned Muslim consumers display higher confidence in Belgian than in Islamic institutions, which associates with perceiving a lack of information, poor hygiene and safety concern as barriers to purchasing halal meat. Confident consumers display a clear preference for Islamic institutions to monitor and communicate about halal. Islamic idealists, who are typified by younger age, second generation and high Muslim self-identity, differ from the confident consumers through their very low confidence in local Belgian actors and institutions.

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# 1 Introduction

## 1.1 Religious motives and meat consumption

Food choice and consumption behaviour are imbued with social rules and meaning. Meat in particular is a medium rich in social meaning because of its association with cultural habits and rituals, both religious and secular (Fiddes, 1992). With respect to food prescriptions in Islam, Muslims have to follow a set of dietary laws or prescriptions which determine those foods that are halal. Although the dietary laws imposed by Islam may be rather strict, the amount of people following them, even when immigrated, is usually quite substantial (see introduction p 14). Factors explaining differences in adherence to religious dietary prescriptions pertain among others to social structures, e.g. origin, immigration, and generation differences (Limage, 2000; Bergeaud-Blackler, 2001; Saint-Blancat, 2004; Ababou, 2005; Bergeaud-Blackler & Bonne, 2007). However, not only religious motives determine halal meat consumption, but also health, respect for animal welfare and social issues, such as religious identity and degree of acculturation (Bonne & Verbeke, 2006; Bergeaud-Blackler & Bonne, 2007; Bonne, Vermeir, Bergeaud-Blackler & Verbeke, 2007).

## 1.2 Scope and objectives

The scope of this study is on investigating public trust of Belgian Muslims in the most relevant information sources related to halal meat, as well as on consumers' confidence in key actors involved with the halal meat chain. The objective of this research is threefold. First, to examine public trust in sources providing information on the halal status of meat. Second, to assess consumer confidence in key actors and institutions to manage and monitor the halal meat chain. Third, to identify and profile consumer segments within the Belgian Muslim population based on their institutional trust level. The study also investigates whether perceived health and safety of halal meat, and potential consumption barriers related to safety and behavioural variables differ among the identified segments. It, furthermore, sought to determine whether socio-cultural and individual characteristics associate with trust-based market segments. The remaining sections in this introduction provide the argument for our focus on the issue of trust among the minority Muslim population facing halal quality uncertainty. Next, the research method and empirical findings will be presented and discussed.

## 1.3 Role of trust in halal credence quality

The meat chain conforming to all prescribed religious criteria is very complex and the risk for cross-contamination is substantial at all stages, i.e. halal meat becomes haram (i.e. prohibited) for example when in contact with pork meat. Despite growing awareness of this risk, in most European countries, current halal chain control – on top of the standard mandatory veterinary inspections issued by international and national legislation – is limited or almost non existing. Moreover, Muslim consumers in predominantly non-Muslim countries are increasingly attentive to the content of their foods especially since food chains are becoming longer and more complex (Bergeaud-Blackler, 2005). Furthermore, the conception of halal has become symbolic and emotional on top of religious (Bergeaud-Blackler, 2006), in particular among second and third generation Muslims in immigrant populations. The evolution of the definition and symbolic meaning of halal, together with emerging shopping and eating habits among young generations entail particular challenges for producing, controlling and guaranteeing the credence quality "halal".

Credence characteristics of food have become very important to consumers (Brunsø, Fjord & Grunert, 2002; Grunert, 2006). These characteristics are not visible and cannot be validated by the consumer even after experiencing the product, hence yielding potential quality uncertainty during the (pre-)purchasing stage. Therefore, consumers have to rely on the seller or outside observers, and put their trust in the information source and information received (Andersen, 1994).

Credence characteristics are a matter of trust in sources providing information and confidence in the key actors and institutions managing the risk. In general, trust refers to interpersonal relations, whereas confidence relates rather to institutional relations (Weber & Carter, 1998). Trust is mainly about whether the information source is perceived to be conveying information in an open and transparent way whereas confidence rather refers to the perceived competence of the information source or institution to perform a particular task such as information provision, monitoring or controlling. Under certain circumstances, institutions manage and communicate about the hazard at the same time, however some actors for example friends and family only serve as potential information sources.

In communication in general, and risk communication in particular, source credibility emerges as an important factor. Furthermore, trust in information sources is unlikely to be very influential for potential hazards where people already hold very extreme attitudes about the particular hazard (Frewer, Howard & Shepherd, 1998), which is assumed to be the case for religiously driven consumption of halal meat. In such circumstances, people are more likely to assess the information, to see if it aligns with their attitudes, and if not, to change their opinion about the information source rather than change their attitudes. With respect to institutional confidence, this seems to be influenced by the perceptions of institutional characteristics such as knowledge, accuracy, concern with public welfare (Frewer, Howard, Hedderley & Shepherd, 1996), competence, honesty (Frewer, 2000) and trustworthiness (Meijboom, Visak & Brom, 2006). The way in which people respond to different risks is socio-culturally and individually constructed: what is acceptable for one demographic or



cultural group may not be acceptable for another. Different groups within a same society understand and respond to risks differently (Shaw, 2003) depending on regional, ethnic, socio-economic or gender differences (Frewer, 2000). Furthermore, a person's religious upbringing can play an important role in trust formation (Huffman, Rousu, Shogren & Tegene, 2002).

For Muslim consumers, trust in halal meat relates to the certainty about the process attributes and the safety in terms of meat wholesomeness. Previous research (see chapter 3) showed a very strong link between slaughter method and health and safety perception: the Islamic slaughter method is believed to lead to complete bleed out of the animal whereby consumers believe less bacterial contamination can occur, hence resulting in healthier meat (Bonne & Verbeke, 2006). Nevertheless, mass media and word-of-mouth communication about eventual frauds with halal meat are detrimental for the general trust in halal meat. In addition, lack of institutionalised trust can fuel consumers' quality uncertainty and increase the perceived risk to consume meat that is not really halal and therefore prohibited for Muslims.

# 2 Materials and method

Cross-sectional data were collected through a survey in Belgium during summer 2006. Sampling procedure, data collection and characteristics of the overall sample were previously presented in chapter 4, section 4.2.2 and 4.2.3.

## 2.1 Measurement of constructs

The questionnaire measured trust in twenty potential sources of information about halal meat and confidence in seven institutions that potentially could contribute to monitoring and controlling of the halal meat chain. Each item was measured on a five-point interval scale ranging from 'very untrustworthy' to 'very trustworthy'. Next, perceived health and safety of halal meat was measured on five attributes: safety, control, hygiene, health and nutrition using a five-point semantic differential scale. To assess potential consumption barriers for halal meat, three items related to safety (perceived lack of control, of hygiene and of information) were measured on a five-point interval scale ranging from 'definitely no reason for not eating halal meat' to 'definitely a reason for not eating halal meat'. Behavioural variables include halal meat consumption frequency as well as purchasing frequency for the following potential places of purchase: Islamic North African butcher, abattoir, farm gate, supermarket and Belgian butcher. Behavioural variables were measured through a six-point frequency scale ranging from 'never' to 'every day'.

Finally, the questionnaire measured individual and socio-cultural characteristics of the respondents, including acculturation and self-identity. To assess acculturation, 11 items were used for assessing dietary acculturation (Liou & Contento, 2001, Bonne, Vermeir,

Bergeaud-Blackler & Verbeke, 2007); ethnic social relations, language use and media use (Goetz, 2003; Verbeke & Lopez, 2005). A five-point interval scale ranging from 'totally Maghrebian' (1) to 'totally Belgian' (5) was used. Self-identity was measured using the statements 'I consider myself a Muslim' (Sparks & Shepherd, 1992; Bonne, Vermeir, Bergeaud-Blackler & Verbeke, 2007), 'I consider myself a good Muslim' and 'I consider myself a practising Muslim' on a five-point Likert scale ranging from 'totally disagree' to 'totally agree'. Individual characteristics such as age, gender, origin, generation, place of residence, level of education, occupation, marital status, and number of children were also included.

### 2.2 Analyses procedures

Data were analysed using SPSS 12.0. First, exploratory factor analyses were performed. The reliability of the resulting factors was tested using Cronbach's alpha measure of internal reliability consistency. Next, hierarchical and K-means cluster analysis using the confidence in institution factors was performed to identify consumer segments[18]. Cross-tabulation with $\chi^2$ test and One-Way ANOVA with Tukey HSD post hoc tests were used to profile the clusters in terms of trust in information sources, health and safety perception, perceived barriers, consumption frequency, place of purchase, socio-cultural and individual characteristics.

## 3 Results

### 3.1 Exploratory factor solutions

With respect to trust in information sources about halal meat, principal component analysis revealed four factors (Table 1) explaining 68.1% of the variance in the original data. The first factor emphasises trust in mass media and commercial sources ($\alpha = 0.91$); the second one refers to independent information sources ($\alpha = 0.92$); the third includes Muslim sources ($\alpha = 0.83$); and the fourth can be labelled specifically as distrusted commercial sources ($\alpha = 0.83$). All factors had sufficient internal reliability consistency.

[18] 17 respondents were omited from cluster analysis due to incomplete data.



**Table 5-1** Principal components loadings for trust in information sources regarding halal meat

| | Factor 1 Media and commercial | Factor 2 Independent | Factor 3 Muslim | Factor 4 Commercial |
|---|---|---|---|---|
| Advertisements | 0.85 | | | |
| Television | 0.85 | | | |
| Radio | 0.84 | | | |
| Supermarket | 0.76 | | | |
| Farmers / breeders | 0.65 | | | |
| Consumer organisations | | 0.56 | | |
| Scientists | | 0.84 | | |
| Doctors | | 0.84 | | |
| Government | | 0.61 | | |
| Public health advice | | 0.76 | | |
| Dietician | | 0.67 | | |
| Friends and family | | | 0.68 | |
| Muslim Executive of Belgium | | | 0.79 | |
| Local mosque | | | 0.84 | |
| Islamic Maghrebian butcher | | | 0.71 | |
| Mosque of Brussels | | | 0.76 | |
| Meat industry | | | | 0.68 |
| Newspapers | | | | 0.62 |
| Islamic Turkish butcher | | | | 0.52 |
| Belgian butcher | | | | 0.63 |
| % variance explained | 21.2 | 19.1 | 15.9 | 15.9 |
| Cronbach's α | 0.91 | 0.92 | 0.83 | 0.83 |

Next, factor analysis yielded a two-factor solution explaining 57.7% of the variance (Table 2) for confidence in institutions that can potentially intervene in monitoring and controlling of the halal meat chain. The first confidence factor captures all items related to Islamic institutions, while the second factor is referred to as confidence in Belgian institutions including the Belgian Food Standards Agency and the Belgian butcher. Only the Muslim confidence factor had sufficient internal reliability consistency (α = 0.80), while the alpha coefficient for confidence in the Belgian institutions was only 0.51.

**Table 5-2** Principal components loadings for confidence in institutions for monitoring and controlling the halal meat chain

| | **Factor 1 Muslim institutions** | **Factor 2 Belgian institutions** |
|---|---|---|
| Muslim Executive of Belgium | 0.73 | |
| Local mosque | 0.83 | |
| Islamic North African butcher | 0.74 | |
| Islamic Turkish butcher | 0.63 | |
| Mosque of Brussels | 0.80 | |
| The food agency | | 0.80 |
| Belgian butcher | | 0.70 |
| % variance explained | 35.3 | 22.4 |
| Cronbach's α | 0.80 | 0.51 |

Factor analysis with the five health and safety perception items yielded a one factor solution explaining 61.5% of the variance in the original data (Table 3). This factor will further be referred to as "health and safety perception" of halal meat (α = 0.84). Finally, one factor is also extracted representing consumption barriers related to safety issues such as perceived lack of control, lack of information and poor hygiene and is therefore called "consumption barriers" (α = 0.76).



**Table 5-3** Principal components loadings for perceived health and safety of halal meat and potential barriers for consuming halal meat

| | **Factor 1 Health and safety perception** | | **Factor 2 Consumption barriers** |
|---|---|---|---|
| Hygiene | 0.81 | Lack of control | 0.93 |
| Safety | 0.85 | Poor hygiene | 0.88 |
| Control | 0.75 | Lack of information | 0.85 |
| Health | 0.75 | | |
| Nutritious | 0.73 | | |
| % variance explained | 61.5 | | 41.5 |
| Cronbach's α | 0.84 | | 0.76 |

### 3.2 Market segmentation

In order to reveal market segments, first, hierarchical clustering was performed using the factors obtained for confidence in Islamic institutions and confidence in Belgian institutions. Next, a K-means cluster analysis using Ward's method was performed with initial cluster centres resulting from the hierarchical clustering procedure. The respective sizes and scores on the segmentation variables are reported in table 4 together with a comparison of the clusters in terms of trust in information sources. Next, differences between the segments in terms of behavioural variables (consumption frequency and place of purchase), perceived health and safety of halal meat and consumption barriers are reported (Table 6). Finally, the segments are profiled using socio-cultural and individual variables (Table 7).

The cluster analysis reveals four types of consumers. Segment 1 (29.1% of the sample) can be typified as "Indifferent". These consumers have as much confidence in Islamic as in Belgian institutions; however, both institutions receive only a rather low confidence score. They also report mean scores around the mid point of the scale for all information source factors.

The smallest segment (9.7% of the sample) consists of consumers who have more confidence in Belgian than in Islamic institutions for managing and controlling the halal meat chain. Islamic information sources are, however, most trusted followed by all other sources receiving an equal, slightly positive evaluation. This segment is called "Concerned".

The third and largest segment (33.1% of the sample) reports the highest confidence in Islamic institutions together with some but low confidence in Belgian institutions. They especially trust Islamic information sources. This segment will be typified as "Confident".
Segment 4 (26.7% of the sample) consists of "Islamic idealists": they claim a high confidence in Islamic institutions but have completely no confidence in Belgian institutions. For these consumers, only information coming from Islamic sources is trustworthy.

## 3.3 Profiling of the clusters

### *3.3.1 Trust in information sources and institutions*

With respect to obtaining information about halal meat in general, Muslim consumers most trust family and friends (M= 4.25, SD= 0.97) followed by the Islamic North African butcher (M= 4.09, SD= 0.90) and the Muslim Executive of Belgium (EMB; M= 4.00, SD= 1.09) as information sources. The Belgian butcher, however, is very much distrusted (M= 1.81, SD= 1.10). Hence, when considering the identified factors, Muslim actors are most trusted (M= 4.03, SD= 0.78). Mass media and commercial actors (M= 2.82, SD= 1.20), independent sources (M= 2.82, SD= 1.04) and distrusted actors (M= 2.63, SD= 0.78) obtained a neutral to low trust score.
In a similar vein, Muslim consumers reported highest confidence in Islamic institutions to take upon them the supervision role of the halal meat chain. The Islamic butcher (M= 3.96, SD= 1.00) and the EMB (M= 3.72, SD= 1.16), being a representative institution for Islamic religion since 1996, receive most confidence from Muslim consumers. The latter has been charged by the Belgian government to supervise the halal meat chain and to introduce a label, however, until mid 2007, control is almost non-existing and no halal label has been established. In contrast, Muslims have only very little confidence in the Belgian butcher for controlling and labelling halal meat (M= 1.71, SD= 1.05). The Belgian Food Standards Agency, which is the primary responsible for controlling the meat chain, scores neutral on average (M= 3.06, SD= 1.35).
From all segments, "Confident consumers" and "Islamic idealists" display the strongest trust in Islamic information sources ($F = 45.25$, $p < 0.01$) and confidence in Islamic institutions ($F = 104.31$, $p < 0.01$) with the latter displaying the lowest confidence in Belgian control and independent, media and commercial, and commercial sources. The "Indifferent consumers" are rather undecided and have as much confidence in Islamic as in Belgian institutions whereas "Concerned consumers" in segment 2 have more confidence in Belgian than in Islamic control. The "Concerned" consumers display the highest trust in independent, media and commercial and commercial sources although they do trust Islamic sources too.
These findings are further substantiated by correlation analysis showing that the more Muslims favour a Belgian institution for managing the halal meat chain, the more they trust independent experts ($r=0.474$, $p<0.01$), commercial ($r=0.415$, $p<0.01$) and media and commercial sources ($r=0.430$, $p<0.01$) for information provision on halal meat. In contrast,



the more a Muslim relies on Islamic information sources, the more s/he has confidence in Islamic institutions ($r=0.702$, $p<0.01$). Nevertheless, Muslim consumers who perceive a lack of safety, hygiene and information as a potential barrier for eating halal meat, are less in favour of Islamic supervision ($r=-0.175$, $p<0.01$) and Muslim information sources ($r=-0.161$, $p<0.01$), though rely more on independent experts ($r=0.161$, $p<0.01$) for information on halal meat. More favourable beliefs with respect to the health and safety of halal meat correlates with higher trust in Islamic information sources ($r=0.319$, $p< 0.01$) and higher confidence in Islamic supervision institutions ($r=0.359$, $p< 0.01$).

**Table 5-4** Profile of the confidence-based consumer segments in terms of trust in information sources, comparison of mean scores (n=350)

| | **Indifferent** n = 102 (29.1%) | **Concerned** n = 34 (9.7%) | **Confident** n = 116 (33.1%) | **Islamic idealists** n = 98 (26.7%) |
|---|---|---|---|---|
| *Confidence in institutions for monitoring and controlling* | | | | |
| Islamic | 2.79a | 3.79b | 4.13c | 4.02bc |
| Belgian | 2.76c | 4.20d | 2.46b | 1.18a |
| *Trust in information sources* | | | | |
| Islamic | 3.37a | 4.09b | 4.31b | 4.34b |
| Independent | 3.21b | 3.38b | 2.95b | 2.07a |
| Media and commercial | 3.13b | 3.41b | 3.04b | 2.03a |
| Commercial sources | 2.69b | 3.20c | 2.75b | 2.20a |

Different letters (a – b- c – d) indicate significantly different average scores on five-point scaling using ANOVA and Tukey HSD post hoc test.

### *3.3.2 Health and safety perception and consumption barriers*

In general, Muslim consumers have a positive perception of the wholesomeness and safety of halal meat (M= 4.25, SD= 0.75). ANOVA shows a significantly different perception between the segments ($F = 13.36$, $p < 0.01$) with the "Confident consumers" displaying the most positive perception of health and safety of halal meat and the "indifferent consumers" reporting the lowest score (see Table 6). Consumers with a more positive perception report lower perceived barriers related to safety issues ($r=-0.214$, $p<0.01$) which could prevent them from eating halal meat ($r= -0.118$, $p<0.01$). While being more sensitive to safety issues, they intend more to buy halal meat at the supermarket ($r= 0.231$, $p<0.01$) perhaps because this retail type provides them with more information and reassurance on the safety of meat. It can be assumed that for these consumers, lack of trust in halal meat might cause

them to eat non-halal meat since correlation analysis reveals a positive relation between perceived consumption barriers related to safety issues and eating non-halal meat (r= 0.195, p<0.01); and a strong positive relation between the latter and purchasing meat at the supermarket (r= 0.562, p<0.01). Hence, for "Indifferent" and "Concerned" consumers, safety issues such as lack of information, hygiene and control are potential reasons for not eating halal meat ($F = 3.30$, $p < 0.05$).

*3.3.3 Consumption frequency and place of purchase*

With respect to halal meat consumption, 46.2% of the respondents claimed to eat halal meat on a daily or almost daily basis whereas 29.9% report to eat halal meat 2-3 times a week and 15.9% 1-2 times a week. Trust levels do not associate significantly with halal meat consumption frequency (see table 5). All segments report an average (segment 1) or slightly more than average consumption frequency score with the "Confident consumers" displaying the relatively highest halal meat consumption.

The Islamic North African butcher is the most frequented place of purchase for all Muslim respondents of whom 67.2% say always to buy their meat there. No significant differences were found between the segments. The use of short market channels for halal meat, such as the abattoir or farm gate are relevant as well, and receive higher frequenting than supermarkets for the provision of halal meat: 40.1% and 42.9% of the respondents report to buy meat at the abattoir or farm gate seldom or from time to time. An overrepresentation of second generation Muslims who are less familiar with buying at the slaughterhouse or at the farm gate may explain the low score for these places of purchase. Nevertheless, "Confident consumers" report to buy more at the abattoir ($F = 3.31$, $p < 0.05$) and farm gate ($F = 3.80$, $p < 0.01$) than the other segments. Although 90.6% of the respondents claim never to buy halal meat at the supermarket (especially "Confident" and "Islamic idealist" consumers), "Indifferent" and "Concerned" consumers report provision of halal meat through supermarkets ($F = 11.54$, $p < 0.01$). In Belgium, halal meat is only recently available in a few supermarkets which could explain the rather low score of this retail format.



**Table 5-5** Profile of the confidence-based consumer segments in terms of health and safety perception, consumption barriers, halal meat consumption frequency and place of purchase, comparison of mean scores (n=350)

| | **Indifferent** n = 102 (29.1%) | **Concerned** n = 34 (9.7%) | **Confident** n = 116 (33.1%) | **Islamic idealists** n = 98 (26.7%) |
|---|---|---|---|---|
| Health and safety perception | 3.82a | 4.18ab | 4.72b | 4.39b |
| Consumption barriers | 2.52b | 2.58ab | 1.99a | 2.14ab |
| Halal meat consumption | 2.53a | 2.76a | 2.84a | 2.78a |
| *Place of purchase* | | | | |
| Islamic North African butcher | 4.16a | 4.06a | 4.39a | 4.56a |
| Slaughter house | 0.58a | 0.88a | 1.13b | 0.89a |
| Farm | 0.61a | 0.65a | 1.11b | 0.82a |
| Supermarket | 0.46b | 0.44b | 0.06a | 0.00a |

Different letters (a – b- c – d) indicate significantly different average scores on five-point scaling using ANOVA and Tukey HSD post hoc test.

*3.3.4 Socio-cultural and individual characteristics*

Table 6 presents the socio-cultural and individual characteristics of the four segments. With respect to education level, Indifferent consumers consist of significantly higher educated respondents whereas lower educated respondents tend to belong rather to the Confident or Islamic idealist segments ($\chi^2 = 31.31$, $p < 0.010$). Significantly younger consumers are found among the "Islamic idealists" while respondents older than 35 years belong rather to the "Indifferent" and "Concerned" consumers ($\chi^2 = 26.40$, $p < 0.010$). Generation level differs only marginally between the four segments, with a tendency that first generation Muslims belong especially to the "Concerned consumer", while second generation Muslims belong rather to the "Islamic idealist" segment ($\chi^2 = 6.48$, $p = 0.090$). No significant differences between the segments are found related to gender and presence of children in the family.

Furthermore, with respect to socio-cultural characteristics, findings indicate that self-identity differs significantly between the segments ($F = 9.85$, $p < 0.001$). Muslims with a high self identity belong rather to the "Islamic idealists" and those with a relatively low identification with Islam are rather classified as "Indifferent consumers". Level of acculturation does not differ significantly between the segments.

**Table 5-6** Profile of the confidence-based consumer segments in terms of individual and socio-cultural characteristics (n=350)

| | Indifferent n = 102 (29.1%) | Concerned n = 34 (9.7%) | Confident n = 116 (33.1%) | Islamic idealists n = 98 (26.7%) |
|---|---|---|---|---|
| *Individual characteristics (%)* | | | | |
| Lower education (primary, secondary school) | 24.5 | 32.4 | 48.3 | 45.3 |
| Higher education (bachelor, master, PhD) | 75.5 | 67.6 | 51.7 | 54.7 |
| Age ≤ 35 years | 73.6 | 73.5 | 80.1 | 89.8 |
| Age > 35 years | 26.4 | 26.5 | 19.9 | 10.2 |
| First generation | 18.2 | 27.3 | 17.4 | 9.5 |
| Second generation | 81.8 | 72.7 | 82.6 | 90.5 |
| *Socio-cultural characteristics (mean score)*[a] | | | | |
| Self-identity | 3.98a | 4.32ab | 4.38b | 4.48b |
| Acculturation | 3.26a | 2.93a | 3.13a | 2.99a |

[a] Different subscripts (a, b, c, d) indicate significantly different average scores on five-point scaling using ANOVA and Tukey HSD post hoc test.

## 4 Discussion and conclusions

Four consumer segments based on their confidence in institutions that could monitor control the halal meat chain were identified. The clusters differ in terms of trust in information sources on halal meat, health and safety perception, consumption barriers, consumption frequency and place of purchase. Furthermore, it is found that socio-cultural and individual characteristics differ among the consumers segments. The typical profiles and ideas held by the different segments will be summarised and illustrated with verbatim statements obtained through previous qualitative research in the following paragraphs.

The "Indifferent" consumers (segment 1) are undecided on who should control the halal meat chain and have as much, although only moderate, confidence in Islamic as in Belgian institutions. All sources are somewhat trusted with Islamic sources being most trusted; however, these consumers display the lowest trust in Islamic sources of all consumers. They also have the lowest perceived health and safety of halal meat and take safety issues in account when eating halal meat. Being aware about safety problems, they appear to eat



less halal meat and buy relatively more at the supermarket. Nevertheless, the Islamic butcher remains their main place of purchase for halal meat.

"Concerned" consumers (segment 2) are most worried about safety issues in terms of hygiene, control and information related to halal meat and possibly therefore they tend to trust rather Belgian than Islamic institutions for monitoring and controlling the halal meat chain. Previous exploratory research showed that Muslim consumers who doubt about the safety of halal meat in terms of hygiene and control regularly buy (non halal) meat at the supermarket in order to obtain impersonal quality reassurance; the labelling information satisfies their interest in information on safety. A typical verbatim statement as obtained from the participants of this qualitative study (Bonne & Verbeke, 2006), illustrating this behaviour under uncertainty reads: "*I lack information when buying meat from an Islamic butcher: where does it come from, when has it been slaughtered…. So I buy (non-halal) meat from the supermarket where I can find this information on the label of fresh meat*."

"Concerned" consumers also report the highest trust in independent, media and commercial and commercial sources. However, their halal meat consumption is not being negatively influenced by their concern. Although these consumers tend to trust Belgian institutions and have more trust in non-Islamic sources as compared to other segments, they display a relatively high Muslim identity and are relatively low acculturated. The fact that this segment has the highest share of first generation Muslims (i.e. born abroad) possibly accounts for this specific profile.

Consumers in segment 3 and 4 have most confidence in Islamic institutions with "Islamic idealists" displaying a very low confidence in Belgian institutions. Only Islamic sources are trusted to provide them with information about halal meat. They feel positive about the wholesomeness and safety of halal meat and perceive relatively little barriers for eating halal meat resulting in the highest meat consumption. Together, these consumers form 60% of the halal meat market. Both segments buy halal meat almost exclusively at the Islamic butcher, however, "Confident" consumers reveal the relative highest purchasing frequency at the abattoir and farm. Price could be driving these consumers towards short distribution channels, however earlier research revealed other motivations on top of price such as information about safety and, even more important, personal reassurance about the halal status of the meat: *"The problem when buying at an Islamic butcher is the lack of quality and halal guarantee. Hence, many Muslims buy sheep or chickens to slaughter themselves to be sure it has been ritually slaughtered*" (verbatim from: Bonne & Verbeke, 2006).

Finally, the "Islamic idealists" are the youngest and have the highest Muslim identity. They display the most extreme responses towards trust in institutions and information sources: they feel extremely positive about Islamic institutions and sources and extremely bad about Belgian institutions and non-Islamic sources. These findings confirm the conclusion that the conception of halal has become symbolic and emotional on top of religious, in particular among young Muslims (Bergeaud-Blackler, 2006). They form an important market segment, since they represent a substantial part of the future responsible persons for meat purchases within their families.

Next to distinguishing different segments, the main conclusion is that Islamic institutions and especially the Islamic butcher are best placed in Muslim consumer's opinions for managing

the control and communication about halal meat. Exploratory research with Muslim consumers in Belgium already concluded that the Islamic butcher is most trusted for information about the halal status, whereas halal-labelled meat, in supermarkets is often distrusted. One female respondent of the second generation proposed to make a halal corner in the supermarket (Bonne & Verbeke, 2006): *"Even if halal meat was offered in the supermarket, I would not trust it. I have heard from people working in meat factories that it is not really halal meat. They would really have to convince me that the meat is halal, perhaps by putting a Muslim butcher behind the halal meat counter in the supermarket."*

Social capital theory indeed states that individuals who are closer in social status or who have similar personal capital are more likely to trust one another (Glaeser, Laibson, Scheinkman & Soutter, 2000). For example, individuals who were raised with a particular religious tradition place more trust in others that were raised within the same religious tradition. These findings result in the Islamic butcher being the most important place of purchase for halal meat. Buying at the Islamic butcher is exemplary for behaviour where product authenticity and trust are mediated through personal interaction, which was also defined as relational trust by Kjearnes and Dulsrud (1998). Our results also confirm the conclusions from Becker, Benner and Glitsch (2000) that familiar butchers, with whom consumers have personal contact, are by far the most trusted source for information on the credence characteristics of meat. These results also corroborate findings from Krystallis, Chryssochoidis and Scholderer (2007) who demonstrated that the choice of traditional channels resulting in a personal relation with the butcher together with the use of intrinsic quality cues by Greek consumers can be understood as efforts to decrease risk related to the purchasing decision. Furthermore, our findings are also in line with Kjaernes, Warde, Lavik and Harvey's (2005) suggestion that when institutional trust fails social networks become very important within certain cultural settings. Finally, Gellynck, Verbeke and Vermeire (2006) concluded that private or voluntary initiatives of meat chain participants are most appropriate with respect to monitoring process attributes.

In general, Muslims relate positively to the safety and wholesomeness of halal meat. However "Indifferent" and "Concerned" consumers are slightly worried about lack of control, information and hygiene. They could be assured by information which is available at the point of purchase for example, which is reflected by the fact that they mostly buy meat at the Islamic butcher. According to Shaw (2003), the public does not always make food-related decisions that are safe. In some cases, other factors such as tradition, habit, pleasure or financial constraints, may be more salient features of decision-making besides risk. Exploratory research showed that although some consumers do not have a solid confidence in their butcher with respect to hygiene and safety, they feel not to have any valuable alternative (Bonne & Verbeke, 2006). A female respondent declared that: *"... during summer when the butcher goes on holiday, halal meat availability is a problem. I am then obliged to buy meat at that one butcher who is open, even if I know the meat is not fresh and the hygienic conditions are unacceptable."*

In the case of halal meat, meat offered by a Muslim is always to be trusted even when information about the halal status is not directly available (Benkheira, 2002). It is a Muslim's responsibility to ensure procuring only halal meat, and, if the meat appears to be haram this



is the butcher's responsibility towards God. Furthermore, with respect to the wholesomeness of halal meat, previous research has shown that intrinsic quality attributes such as colour, freshness and smell are used as quality evaluation cues before making the purchase decision (Bonne & Verbeke, 2006).

Nevertheless, Muslims are increasingly requesting a halal label informing and assuring them about the status and the wholesomeness of halal meat: "*There should be a halal label controlled by an official institution in order to prevent fraud which is probably the case now"* said a young male respondent of the second generation during the previous qualitative research (verbatim from: Bonne & Verbeke, 2006). Especially second or third generation Muslims are breaking with the shopping habits of their parents based on an established personal relationship with the Islamic butcher. In accordance with non-Muslims, they look after convenience shopping and want to be guided by labelling information (Bergeaud-Blackler, 2006). A female respondent of the second generation in Belgium said "to desire both: tradition and convenience in shopping", herewith referring to the desire of having availability of halal labelled meat in supermarkets (Bonne & Verbeke, 2006). Research has shown that demand for more information and use of labels is especially true for consumers concerned with safety and nutrition or health issues (Bernués, Olaizola & Corcoran, 2003). Once a label has gained consumer confidence, it can also become the basis for inference making – i.e. other quality dimensions, in addition to what the label stands for, can be inferred based on the label. Muslim consumers already perceive halal meat as being healthier and tastier (Bonne & Verbeke, 2006), hence, a trusted halal quality label could signal experience and credence attributes of halal meat and become a search attribute when purchasing halal meat at the butcher shop or in the supermarket.

This study faces some limitations with respect to the sampling procedure and sample characteristics and therefore generalisation to the entire Muslim population in Belgium and abroad remains speculative. Nevertheless, these insights provided in the market structure with relation to trust and confidence, could be beneficiary for policy makers or private certifying organisations whose aim might be to establish a supervision mechanism for the halal meat chain. Furthermore, communication strategies for halal meat may consider using the most trusted sources to target particular Muslim consumer segments. Further research is recommended to investigate Muslims' risk perception towards halal meat consumption and also their need, acceptance and willingness to pay for a halal label, as well as to assess (the reasons for) differences and similarities between Muslim and non-Muslim meat consumers. Finally, more qualitative research is recommended to provide specific insights in halal meat consumption which are difficult to assess using quantitative research methods for example on the role of social pressure on halal meat consumption, or on the degree of personal responsibility of Muslim consumers towards following religious dietary prescriptions.

# Chapter 6

## MUSLIM CONSUMERS' WILLINGNESS-TO-BUY AND PAY FOR CERTIFIED HALAL LABELLED MEAT IN BELGIAN SUPERMARKETS AND BUTCHER SHOP

## Abstract

This paper investigates Muslim consumers' willingness-to-buy certified halal labelled meat at the supermarket and their willingness-to-pay (WTP) for extra reassurance about the halal status of fresh meat through a certified label at the Islamic butcher and supermarket. Cross-sectional data were collected through a survey with 202 Muslim consumers during summer 2007 in Belgium. Findings indicate that especially more acculturated and female consumers are in favour of shopping for halal meat in a supermarket on the condition that supermarkets meet several requirements including the separation of halal from non-halal meat, and the organisation of adequate controls and the provision of guarantees. Next to being a condition for buying, trust in the halal meat status is also perceived as a potential benefit from buying at the supermarket in addition to availability and convenience in shopping. Results further show that a lot more Muslim consumers are willing to pay a premium for halal labelled meat at the Islamic butcher shop (62.9%) than in the supermarket (35.3%). The higher the importance attached to a halal label and the more distrust in the actual halal meat status, the higher the likelihood that a Muslim consumer will accept a higher price for certified halal labelled meat at the butcher shop. Halal meat consumption level and age determine the actual premium Muslim consumers are willing to pay. WTP for certified halal meat at the supermarket is further also influenced by the level of trust in the halal meat status, expected benefits and generation.

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# 1 Introduction

## 1.1 Muslim consumers' interest in quality assurance for halal meat

As a result of food crises during the nineties, consumers have become more concerned about food safety and quality. This has yielded requests for more transparency in the food chain and reassurance about safety and quality through information on diverse qualitative characteristics of food such as nutritious value, origin or production method (Ventura-Lucas, 2004). Halal's production method has become more and more demanded on an international and European level (Bonne & Verbeke, 2008a). Halal is a typical credence process attribute (Darby & Karni, 1973) hence yielding potential quality uncertainty during the (pre-/post-) purchasing stage. In such particular cases, consumers have to rely on the seller's credibility or outside observers' opinions, and put their trust in the information source and information received (Andersen, 1994).

For Muslim consumers, trust in halal meat relates to the certainty about the process attributes and the safety in terms of meat wholesomeness. Previous research showed a general positive consumer perception towards the safety and wholesomeness of halal meat except for a particular segment of Muslim consumers defined as 'indifferent' or 'concerned' consumers (Bonne & Verbeke, 2008b). Nevertheless, lack of institutionalised trust in many European countries and particularly in Belgium can fuel consumers' quality and safety uncertainty and increase the perceived risk to consume meat that is not really halal and therefore prohibited (Bonne & Verbeke, 2008a). Additionally, mass media and word-of-mouth communication about possible frauds with halal meat are detrimental for the general trust in halal meat. In order to reduce risk perception related to the status of halal meat, Muslim consumers are buying meat primarily at the Islamic butcher, their preferred place of purchase (Bonne & Verbeke, 2008b). This buying behaviour is exemplary for behaviour where product authenticity and trust are mediated through personal interaction (Kjearnes & Dulsrud, 1998) and confirms results from other studies on meat consumption in Spain (de Carlos, Garcia, de Felipe, Briz & Morais, 2005) and Greece (Krystallis, Chryssochoidis & Scholderer, 2007), where purchasing meat from a butcher topped meat purchasing from supermarkets for reasons of personal confidence and trust. A recent study with Muslim consumers in the UK (Allam, 2008) confirmed that Muslim consumers have low trust in supermarkets compared to local butchers for purchasing halal meat. However, Bergeaud-Blackler (2006) suggests that young Muslim consumers are breaking with the shopping habits of their parents and increasingly desire labels to inform and reassure them about product quality, just like non-Muslim consumers permitting them to buy meat at the supermarket.

A halal label could be the outcome of a quality assurance scheme so that it can serve as reassurance information tool for the Muslim consumer. The focus of quality assurance schemes has changed over time from management tools to assure food safety into more comprehensive approaches allowing the assurance and safeguarding of process standards, relating e.g. to animal welfare and certified production methods, such as organic or halal (Wood et al., 1998; Fearne et al., 2000, Ten Eyck et al., 2006). The implementation of such

a quality assurance system within the halal meat chain could shift the current civic and domestic orientation towards an industrial or even market coordination of the Belgian halal meat market (Bonne & Verbeke, 2008a). For consumers this could not only mean assurance of the status of halal meat but also improve convenience in shopping, a major challenge for today's Belgian halal market where fresh halal labelled meat is only rarely sold at food retail chains. Nevertheless, a certification strategy for the halal meat chain could ultimately generate consumer price increases for meat (Angulo & Gil, 2007), and therefore, it is relevant to investigate whether Muslim consumers are willing to pay higher prices for additional quality assurance through a label that reduces the perceived risk of eating meat that is not halal.

## 1.2 Scope and objectives

The objective of this study is twofold: first we investigate whether and how much Belgian Muslim consumers are willing to pay for a label that provides additional information about the halal status of meat using the Contingent Valuation (CV) method. The second objective is to examine whether, when (under what specific conditions) and why (expected benefits) Belgian Muslim consumers are willing to buy certified halal labelled meat at the supermarket instead of Islamic butchers. Willingness-to-pay (WTP) is defined as the sum of money representing the difference between consumers' surplus before and after adding or improving a food product attribute (Rodriguez, Lacaze & Lupin, 2007). WTP will be studied at two points of sales: the Islamic butcher and the supermarket.
Previous research (Bonne & Verbeke, 2008b) with a similar sample in the same institutional context showed that the Islamic butcher is still most frequently visited and is perceived as the most trusted option for halal meat purchasing among most first and second generation Muslim consumers. However, especially young, female Muslim consumers and consumers doubting the wholesomeness and status of halal meat, have expressed their interest in purchasing meat products in conventional supermarkets for reasons of convenience and quality reassurance (Bonne & Verbeke, 2006).
The expectation is that Muslim consumers would be more willing to pay a premium for a quality label at the supermarket than at the Islamic butcher because the personal relation with the butcher already functions as a quality reassurance. Krystallis et al. (2007) found that personal interaction results in higher trust in the product. Next, the research literature on the relationship between risk perception; labelling demand and consumer WTP for credence attribute reassurance, the research method and empirical findings will be presented and discussed.



## 1.3 Risk perception, labelling and willingness-to-pay for credence attribute reassurance

Meeting consumers' need for information and quality reassurance has frequently been stressed as a determinant of today's meat consumption with trust being the key issue (Verbeke, 2001; van Dorp, 2003; Marsh et al., 2004; Piggot & March, 2004). Consumer demand for safe and wholesome food in general and meat in particular is the driving force for the introduction of information systems such as branding, traceability and quality assurance schemes (Gellynck et al., 2006). The basic aim behind these strategies is to reduce consumer risk perception to overall meat consumption and eliminate any negative attitudes in terms of various credence characteristics of meat (Fearne et al., 2001). Quality assurance schemes can turn a credence attribute into a search attribute that the consumer can evaluate prior to purchase by reading the label and using related information such as websites or brochures. The central goal of labelling programs is thus to provide consumers with information that they may use in making purchasing decisions and to protect consumers by assuring the truthfulness of information applying either to a final product attribute, a process attribute or a combination of both (Caswell, 2006). Nevertheless, food labelling programs can entail significant costs to industry and society (Roe & Teisl, 2007) leading to consumer price increases (Angulo & Gil, 2007). Although consumer interest in meat labelling information cues in general can not be taken for granted (Verbeke & Ward, 2006), still several studies have shown that certain segments of the population are willing to pay more for food products carrying a label identifying specific credence attributes. For example, Corsi and Novelli (2002) found Italian consumers willing to pay a relatively high premium for certified organic beef. Angulo and Gil (2007) argue that paying a marginal higher price for safety assured products is one possible risk-reduction strategy; next to seeking for information, using brand image or price as a quality guide or shopping at reputable stores given that consumers' perceived risk is high enough.

# 2 Methodology and research framework

To measure WTP for halal status reassurance through a certified label, the CV method was used through a payment ladder. The CV method (Hanemann, 1984) is a standard approach to elicit consumers' WTP for non market goods or attributes. Consumers are given hypothetical situations about a consumer good and asked ex ante to state their WTP in order to obtain a benefit. The payment ladder method asks respondents to select the amount that they are willing to pay from a checklist of payment amounts. It quantifies the value consumers confer to products by associating that value with the sum of money they are willing to pay, or if they are willing to pay a certain premium, expressed either as a sum of money or as a percentage above the reference price (Carmona-Torres & Calatrava-

Requena, 2006). In the present study, respondents are proposed a hypothetical choice namely to buy certified halal meat at a certain price premium reassuring them about the halal status of the meat.

The CV method is suggested as being the most appropriate tool for measuring willingness-to-pay for food safety and food quality attributes (Buzby, Skees & Ready, 1995; Rodriguez et al., 2007). However, this approach has a number of possible biases. First, it is often difficult to state a WTP for an unfamiliar product. Furthermore, WTP also tend to be overstated because of prestige effects of understating due to consumer collaborations effects to keep the prices low. Respondents may also be unsure about their WTP, therefore, a certainty follow-up question asking how sure the respondent is should be added, hereby removing hypothetical bias (Munene, 2006; Blumenschein, Blomquist, Johannesson, Horn & Freeman, 2008). On the other hand, advantages of the CV methods are linked to the simplicity of the asking method. Respondents face a familiar task (Flachaire & Hollard, 2007). It, furthermore, constitutes a flexible measuring tool with quality attributes changes, it is easy to apply and less expensive then other methods (Carson, Wright, Alberni, Carons & Florens, 1994). It is a straightforward and relative simple approach which can be helpful to overcome possible language barriers since the bid values are visualised. The method furthermore, avoids starting points, reduces the number of outliers (Bateman et al., 2002) and leads to precise WTP estimates (Buzby et al., 1995). Since our focus is on measuring WTP for a credence attribute assurance, halal, and our research population, the Belgian Muslim consumer of halal meat, could face unfamiliarity with completing questionnaires, we chose to use the CV method with a payment ladder technique (Bateman et al., 2002) and certainty follow-up questions.

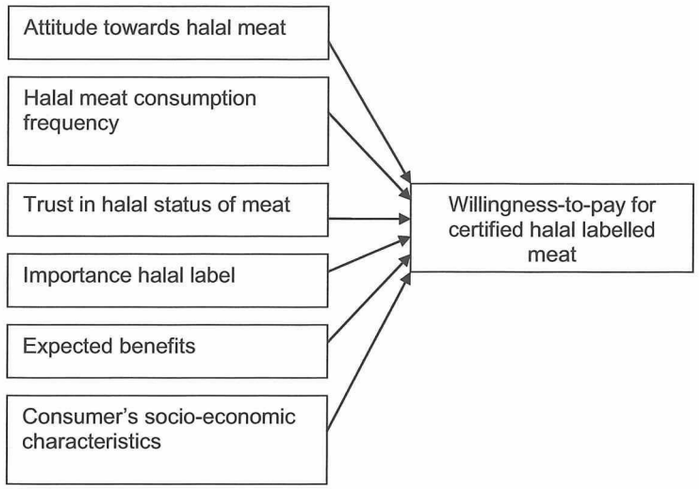
Literature shows that the CV method is controversial especially since CV models only capture a minor share of the variance of WTP and therefore the reliability and validity of the estimates have to be questioned. An alternative to improve the model's quality is including conventional economic models comprising attitudes and other psychological predictors and behavioural intention as a measurement of WTP (Bernath & Roschewitz, 2008). Furthermore, Loureiro and Umberger (2007) state that it is important to consider why consumers might be willing to pay premiums for these products and what conditions must exist for these premiums to exist. Therefore, attitudinal questions and use of the good are mostly included in WTP questionnaires in addition to socio-economic characteristics (Pearce & Özdemiroglu, 2002). Most studies reporting WTP for credence characteristics focussing on food safety attributes (Buzby et al., 1995; Bocaletti & Moro, 2000; Latvala & Kola, 2000; Umberger, Feuz, Calkins & Sitz, 2003; Angulo & Gil, 2007; Batte, Hooker, Haab & Beaverson, 2007, Henseleit, Kubitzki & Teuber, 2007) explain WTP mainly through attitude, purchase or consumption behaviour, risk perceptions, knowledge, food safety concerns, and trust in certification and information sources. More specific, consumers' WTP a premium for a quality label is influenced by several product and consumer characteristics. For example, Krystallis and Chryssochoidis (2005) found that WTP for organic foods is influenced by food quality and security and trust in the certification. According to Botonaki, Polymeros, Tsakiridou and Mattas (2006), organic fruits and vegetables consumers who get information from independent experts and magazines and value health, are willing to pay a



premium for organic food products. Food safety and environmental concerns also enhances consumers' WTP a premium for organic or beef products (Loureiro, McCuskey & Mittelhammer, 2002; Angulo & Gil, 2007). Several studies show a relationship between consumers' WTP and socio-demographics like gender and presence of children (Loureiro et al., 2002) and income (Angulo & Gil, 2007).

Therefore, we hypothesise that Muslims' willingness to pay for certified halal labelled meat will be determined by their attitude towards halal meat in general, halal meat consumption frequency, trust in the status of halal meat, the importance attached to a halal label and socio-demographic characteristics. Furthermore, establishing a certification strategy for the Belgian halal meat chain could involve convenience in shopping. Therefore, expected benefits from shopping in a retail store are expected to positively influence WTP for certified halal labelled meat at the supermarket on top of the other determinants. The resulting framework for this study is presented in figure 1.

**Figure 6-1** Conceptual model of consumer willingness-to-pay for halal labelled meat



# 3 Survey, sampling and questionnaire design

## 3.1 Sample and procedure

Cross-sectional data were collected through a survey in Belgium during Summer 2007. Muslim respondents were personally or electronically contacted. Recruitment was based on a snowball sampling technique starting from friends and acquaintances and increasing through friends and family of the initial contact persons. Furthermore, owners of ethnic food shops and their family, as well as workers of socio-cultural organisations and their members were asked to participate in the study. In parallel, a web survey using the same questionnaire was developed. In similar vein, the snowball sampling technique was used through e-mail and announcements on relevant websites and web forums. In total, 202 surveys were completed of which 118 were obtained as a result of the snowball sampling and 84 via electronic contact. All questionnaires were self-administered by the respondent, hence reducing potential bias from an interviewer.

The characteristics of the sample show that slightly more men (54.2%) then women (45.8%) completed the survey (Table 1). With respect to age, respondents with age ranging from 18 till 79 participated with a mean age of 31.4 years (SD= 12.48). A small but significant difference in mean age between the pen and paper sample (M= 33.9 years; SD= 13.9) and the internet sample (M= 27.8 years; SD= 9.06) is found. Most likely, language and educational barriers among elderly immigrants have led to a relatively young sample. Half of the sample is married or lives together with a partner (52.0%). Most respondents originate from Morocco (67.9%), which is in line with the main Muslim population origin in Belgium. Other participants originate from Tunisia (15.3%) and Algeria (14.2%). A majority of the respondents benefited of higher education: 56% finished secondary school, 12% obtained a bachelor and 10.4% a master degree. However, the internet sample is significantly higher educated ($\chi^2$=20.16, p< 0.001). First generation Muslims (i.e. those born abroad) compose 19.8% of the sample and second generation (i.e. those born in Belgium or who came at or before the age of six years) account for 80.2% of the sample. The sample is not statistically representative for the entire Belgian Muslim population. Although no socio-demographic data on the Belgian Muslim population are available, it is assumed that there is an over representation in the sample of younger and second generation respondents, which places limits on generalisations to the broader population.



**Table 6-1** Socio-demographic characteristics of the sample (n=202)

| | | | | | |
|---|---|---|---|---|---|
| Gender | Male | 54.2 | Origin | Moroccan | 67.9 |
| | Female | 45.8 | | Tunisian | 15.3 |
| Age | ≤ 25 years | 42.6 | | Algerian | 14.2 |
| | 26 – 35 years | 28.7 | | Other | 2.6 |
| | 36 – 45 years | 14.4 | Education | Primary school | 19.5 |
| | 46 – 55 years | 7.9 | | High school | 56.0 |
| | > 55 years | 6.4 | | Bachelor | 12.0 |
| Family | Single | 40.0 | | Master | 10.5 |
| | Married / living together | 52.0 | | Master/ PhD | 2.0 |
| | Divorced / widow | 8.0 | Generation | 1st generation | 19.8 |
| | | | | 2nd or 3rd generation | 80.2 |

## 3.2 Questionnaire and scaling

The survey used a structured questionnaire in Dutch and French, which was pre-tested and refined prior to field work.

Behavioural variables include halal meat consumption frequency which was measured through an eight-point frequency scale ranging from '0 times' to '7 times' a week. The importance of halal meat attributes was measured through 19 characteristics, adapted from exploratory research (Bonne & Verbeke, 2006), including seven search, five experience and seven credence attributes (e.g. halal-label). Attitude was measured through 11 statements related to health, taste, price, safety, animal welfare and quality on a five-point semantic differential scale. Next, trust in the status of halal meat was assessed through 5 statements: 'No halal meat is sold with false information about the halal status', 'I have total confidence that the meat sold at an Islamic butcher is 100% halal', 'Halal meat is safe to eat', 'there is need for an organisation controlling and guaranteeing that the meat is 100% halal' and 'I have total trust that the halal logo on pre-packed meat means it is 100% halal'. All statements were measured via a five-point Likert scale ranging from 'I totally disagree' to 'I totally agree'.

To elicit WTP for a halal label, respondents' were asked to state WTP for a halal label at the Islamic butcher and at the supermarket through a hypothetical context using a payment ladder. A two-stage method is mostly applied in WTP studies and coincides with principles of general systems theory, which takes a holistic approach to explaining relationships between psycho-social and consumer characteristics and human behaviour (Jackson & Noel, 1992). It assumes that consumer's decisions on WTP are made in two stages.

Consumers first decide whether or not to pay a price premium, and second, once the product deemed desirable, they decide how much money they are willing to pay.

The following scenario was presented to the respondents to elicit WTP for certified halal labelled meat at the Islamic butcher: "*When visiting the Islamic butcher shop to buy halal meat, you can deduct from a label on the meat that it has been controlled by a trustworthy halal certification organisation which guarantees you that the meat meets 100% the Islamic production norms and is therefore halal.*" First they were asked to indicate whether or not they are willing to pay an extra amount of money for buying the certified halal labelled meat and secondly, how much more they are willing to pay as a premium over the price they actually are paying. Therefore, 12 possible extra amounts or payment levels were presented ranging from .25 € to 3.00 € per kilogram chicken fillet (6.95 €/ KG). Halal chicken fillet was chosen as example to study Muslim consumers' WTP since it is sold in the Islamic butcher as well as in some Belgian supermarkets.

A second scenario was presented to investigate willingness-to-buy halal meat at the supermarket and WTP a premium for certified halal labelled meat at the supermarket over the Islamic butchers' price who, in the Belgian case, Islamic butcher shops propose the lowest market prices for fresh halal meat. First respondents were asked whether they would be willing to buy at the supermarket. *"When visiting a supermarket (e.g. Carrefour, Delhaize ...) for daily shopping, you see that halal meat is offered with a label indicating that the meat is 100% halal and that it is being controlled by a trustworthy halal certification organisation. Would you buy the meat at the supermarket?"* Second we asked whether they would be willing to pay a premium for reassurance about the halal status through a label above the actual price at the Islamic butcher: *"Would you be willing to pay more for halal labelled meat at the supermarket than at your butcher?"* Similar as the aforementioned scenario, respondents were then asked how much more they are willing to pay given 12 possible payment levels ranging from .25 € to 3.00 € above the actual price for a kilogram chicken fillet at the Islamic butcher (6.95 €/ KG). Furthermore, a certainty follow-up question for both WTP's was asked: 'how certain are you of your answer on the previous question" with a 10-point scale ranging from 0% to 100% certain. Next, reasons for zero WTP were included both for WTP at the Islamic butcher ('I need more time or information to answer this question', 'I refuse to pay higher prices', 'Information about the halal meat status does not guarantee anything', 'I can't afford higher prices', 'I am already sure the meat is 100% halal', 'I don't' know') and at the supermarket ('I need more time or information to answer this question', 'I stay faithful to my own butcher', 'information about the halal meat status does not guarantee anything', 'I have no confidence in the supermarket', 'It does not interest me', 'I don't' know').

Furthermore, expected benefits from buying halal meat at a supermarket in general were asked on a five-point Likert scale from 'totally no reason' to 'surely a reason' including convenience in shopping, hygiene, price, accessibility, trust in control and assortment. Conditions for buying at the supermarket such as halal guarantee through a trustworthy organisation, a Muslim butcher behind the counter, confirmation of halal status by the local imam, a separate shelf with halal products and separation of halal from non-halal meat were also asked on a five-point Likert scale ranging from 'totally no condition' to 'totally a



condition'. Finally, reasons for not buying at the supermarket were presented: 'I need more information or time to answer this question', 'I stay loyal to my butcher shop', 'information about the halal meat status doesn't guarantee anything', 'I don't trust the supermarket', 'It doesn't interests me' and 'I don't know'.

The questionnaire concluded with socio-cultural (e.g. acculturation) and individual characteristics of the respondents. To assess acculturation, 11 items were used for assessing dietary acculturation, ethnic social relations, language use and media use. A five-point scale ranging from 'Totally Maghrebian' (1) to 'Totally Belgian' (5) was used. Individual characteristics such as age, gender, origin, generation, place of residence, level of education, occupation, family income, marital status, and number of children were also included.

## 4 Empirical findings

Data were analysed using SPSS 12.00. First, exploratory factor analyses were performed. The reliability of the resulting factors was tested using cronbach's alpha measure of internal reliability consistency. Cross-tabulation with chi-square association test, independent samples t-tests and correlation analyses were used. Finally, logistic and linear regression analyses were performed to identify the predictors of WTP for halal labelled meat at the Islamic butcher on the one hand and at the supermarket on the other hand.

First, exploratory factor solutions of the measured constructs will be presented. Next, descriptive results on the importance of the attributes of fresh meat will be discussed. Finally, we investigate whether Muslim consumers would like to buy halal meat at the supermarket and whether they are willing to pay a premium for extra information about the halal status of the meat at the Islamic butcher shop and the supermarket.

### 4.1 Exploratory factor solutions

The items measuring attitude towards halal meat yielded a three-factor solution, however, since internal consistency was high ($\alpha$= 0.87), we used one single factor including all attitude items for further analysis. The items measuring trust in halal status of meat displayed insufficient Cronbach's alpha score ($\alpha$< 0.60) and therefore exploratory factor analysis was performed. Two factors were then extracted with the first factor emphasising trust in halal status of meat ($\alpha$=0.78) including the items 'I completely trust that the meat I buy at the Islamic butcher is 100% halal', 'No halal meat is sold with false information about the halal status of the meat' and 'halal meat is safe to eat' explaining 46.4% of the variance. This factor will be called 'trust in halal status of meat'. The second factor including the other 2 items (trust in halal logo and need of control and guarantee) does not have a sufficient internal reliability score ($\alpha$=0.43) and is, hence, excluded for further analysis. The constructs measuring expected benefits ($\alpha$=0.96) from and conditions for buying at the supermarket

(α=0.86) both remain one factor. Finally, factor analysis yielded a two-factor solution for the acculturation items, however, since Cronbach's alpha was acceptable (0.87) indicating high internal consistency, one factor was computed for further analysis.

## 4.2 Attribute importance of fresh halal meat

With respect to the importance Muslim consumers attach to the characteristics of fresh meat (Table 2), results show that hygiene (M= 4.64, SD= 0.58) and freshness (M=4.64, SD=0.59) are the two most important attributes followed by taste (M=4.59, SD=0.55), Islamic production method (M=4.49, SD=0.90) and Muslim ownership (M=4.40, SD=1.00). A halal label is a rather important attribute of meat (M= 4.29, SD=1.05), however, it is more important to young (t=4.740; p<0.01), more acculturated consumers (t=-3.457; p≤0.01) and women (t=-3.173, p<0.05). Today, in Belgium, only very limited halal labelled fresh meat is sold in the supermarket and at the Islamic butcher and therefore it seems that the halal status of halal meat is still deducted from the Muslim butcher rather than from a label. This finding is confirmed by correlation analyses showing that the attribute 'Islamic production method' is more positively correlated to 'Muslim ownership' (r=0.50; p<0.01) than to 'halal label' (r=0.30; p<0.01).



**Table 6-2** Importance attached to fresh meat attributes, mean and standard deviation on 5-point scale (n=202)

| | Attributes | M | SD |
|---|---|---|---|
| **Search** | Fresh | 4.64 | 0.58 |
| | Muslim owner | 4.40 | 1.00 |
| | Appearance | 4.30 | 0.69 |
| | Availability | 4.09 | 0.77 |
| | Price | 4.01 | 0.98 |
| | Visible fat | 3.90 | 1.08 |
| | Colour | 3.87 | 1.13 |
| **Experience** | Taste | 4.59 | 0.55 |
| | Tender | 4.31 | 0.67 |
| | Smell | 4.29 | 0.78 |
| | Juicy | 4.21 | 0.72 |
| | Easy to prepare | 3.50 | 1.13 |
| **Credence** | Hygiene | 4.64 | 0.58 |
| | Islamic production method | 4.49 | 0.90 |
| | Halal label | 4.29 | 1.05 |
| | Animal friendly production | 3.95 | 0.93 |
| | Free of hormones/ antibiotics | 3.86 | 1.10 |
| | Nutritional value | 3.75 | 1.07 |
| | Production region | 2.85 | 1.33 |

## 4.3 Descriptives of the model's constructs

Table 3 presents the mean scores (5-point scales), standard deviations and correlations of the components included in the WTP model. In general, Muslim consumers have a positive attitude towards halal meat and declare to consume it very regularly. As we mentioned before, a halal label is perceived as being rather important. Furthermore, the results show that the sample values only slightly the expected benefits from buying halal meat at the supermarket and that they more or less agree with the presented conditions for selling halal meat at that point of sales. Correlation analyses show a very strong positive relation between attitude and trust in halal meat status. However, the less one trusts halal meat, the more benefits s/he perceives from buying halal meat at the supermarket and the more the conditions for buying there become important. Especially more acculturated Muslims declare they least trust the status of halal meat. Those consumers also attach more importance to a halal label, which seems to be one of the conditions for buying at the

supermarket. Nevertheless, they consume the least halal meat. Possibly, availability of halal meat at supermarkets conditional at being controlled by a trustworthy certification organisation could reassure them and make them eat more halal meat.

**Table 6-3** Pearson correlation coefficients for the measured constructs (n=202)

| | M | SD | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
|---|---|---|---|---|---|---|---|---|---|
| 1. Attitude | 4.00 | 0.66 | - | | | | | | |
| 2. Consumption frequency | 4.55 | 1.74 | .020 | - | | | | | |
| 3. Trust in halal meat status | 3.61 | 1.00 | .617** | .017 | - | | | | |
| 4. Importance halal label | 4.29 | 1.05 | .168* | -.023 | .017 | - | | | |
| 5. Expected benefits | 3.32 | 1.35 | -.280** | -.130 | -.343** | .298** | - | | |
| 6. Conditions | 3.64 | 1.13 | -.033 | .020 | -.156* | .436** | .588** | - | |
| 7. Acculturation | 2.67 | 0.82 | -.224** | -.317** | -.374** | .265** | .399** | .251** | - |

* p< 0.05 ; ** p< 0.01

## 4.4 Willingness to buy certified halal labelled meat at the supermarket

About half of the Muslim consumers (50.5%) claimed to be willing to buy halal meat at the supermarket, especially women ($\chi^2$=8.87; p<0.005) and highly acculturated Muslims ($\chi^2$=15.80; p<0.001). Out of different reasons for not buying at the supermarket, lack of confidence in the supermarket (59%) and staying faithful to the Islamic butcher (20%) were most mentioned. All expected benefits for buying meat at the supermarket are more or less important with 'availability' (M=4.33; SD= 0.87), 'convenience' (M=4.29, SD= 0.97), 'assortment/offer' (M=4.15, SD= 0.93) and 'trust and control' (M= 4.14; SD=1.05) being the most important for those willing to buy at the supermarket. However, supermarkets should take several conditions into account when selling halal meat. Separation of halal meat from non-halal meat (M=4.53; SD=0.79) and control and guarantee from a trustworthy organisation (M=4.42; SD=0.90) are the most important conditions for Muslim consumers willing to buy at the supermarket.
Considering the total sample, all expected benefits (t=-3.36; p≤0.001) and conditions (t=-3.30; p≤0.001) mentioned are more important to women and highly acculturated Muslim consumers (Expected benefits: t=-5.01, p<0.001; Conditions: t=-3.45, p≤0.001) compared to men and low acculturated Muslim consumers.



Guarantee of halal meat through a trustworthy certification organisation seems to be an important condition for Muslim consumers and at the same time an important expected benefit when buying halal meat at the supermarket. The question whether they would be willing to pay a premium for certified halal labelled meat will be answered in the following section.

## 4.5 Willingness-to-pay for certified halal labelled meat

The main focus of the chapter is on the willingness of Muslim consumers to pay a premium for a guarantee about the halal status of the meat through a certified halal label at the Islamic butcher on the one hand and the supermarket at the other hand. WTP responses will be analysed in two stages, first a logistic regression analysis was performed to determine the factors influencing the WTP a premium or not and second a linear regression analysis was conducted to investigate the determinants of the actual premium Muslim consumers are prepared to pay for halal labelled meat (the payment ladder responses).
At the Islamic butcher, 62.9% of the respondents are willing to pay a premium for extra information especially women ($\chi^2$=3.24; p<0.10) and highly acculturated Muslims ($\chi^2$=8.991; p<0.005). 48.2% of the Muslim consumers who are not willing to pay a premium declare that they are already sure that the meat is halal guaranteed and 19.3% refuses to pay higher prices. Logistic regression analysis (Table 4) show that the importance of a halal label and trust in halal status of meat determine whether one is willing to pay a premium or not while age and gender only tend to influence WTP at the Islamic butcher. Together, they explain 43.5% of the variance. Muslims who distrust the halal status of meat and find a halal label important are more willing to pay a premium for extra information through a label. Younger and female Muslim consumers have more chance of willing to pay more at the Islamic butcher. Attitude and behaviour as well as the other socio-demographic characteristics (income, education, acculturation and generation) do not influence WTP or not. In turn, respondents were asked how much they are willing to pay more per kilogram of certified halal labelled chicken fillet. The mean premium consumers are willing to pay for extra information is 1.24 € on top of the 6.9 € for 1 kg chicken fillet which equals 17.9% of the actual price Muslim consumers pay at the Islamic butcher. When analysing the payment ladder responses through a linear regression analyses conditional on willing to pay a premium, results show that only age determine how much one is willing to pay for halal labelled meat ($R^2$=0.063). However, when considering a less strict confidence level (p<.10), consumption frequency also influence WTP. Age and frequency of halal consumption thus influences how much the consumer is willing to pay for extra information. A certainty follow-up question that required respondents to indicate how sure they were about their stated WTP bid showed that the majority of the respondents (82.6%) declared to be at least 80% sure that they would pay their stated WTP bid meaning a sufficient certainty level to interpret their declared WTP as matching with a probable actual purchase (Munene, 2006). However, Ready, Navrud and Dubourg (2001) use stricter cutting-off level and suggest that

only those respondents being 95% sure of their answer will probably be actual willing to pay their stated bid leaving us with 64.4% of the respondents to be at least 90% sure.

**Table 6-4** Logistic regression and linear regression for WTP at the Islamic butcher and the supermarket

| | **WTP Islamic butcher** | | | | **WTP Supermarket** | |
|---|---|---|---|---|---|---|
| | Logistic regression | | Linear regression | | Logistic regression | |
| | $R^2$= .435 | | $R^2$= .063 | | $R^2$ = .566 | |
| | Wald | P | β | P | Wald | P |
| Consumption frequency | 2.693 | .101 | **.204** | **.052** | .141 | .707 |
| Attitude | .217 | .641 | .019 | .857 | 1.178 | .278 |
| Importance halal label | **6.377** | **.012** | .092 | .379 | 1.619 | .203 |
| Trust in halal meat status | **6.230** | **.013** | .081 | .441 | **5.495** | **.019** |
| Expected benefits | - | - | - | - | **10.075** | **.002** |
| Age | **3.030** | **.082** | **-.272** | **.010** | .013 | .911 |
| Gender | **3.508** | **.061** | -.045 | .666 | .690 | .406 |
| Income | 13.302 | .347 | -.004 | .968 | 9.227 | .683 |
| Education | 5.807 | .325 | .024 | .821 | 1.394 | .925 |
| Acculturation | .227 | .634 | .111 | .297 | .117 | .733 |
| Generation | .740 | .390 | -.092 | .421 | **3.412** | **.065** |

When asking Muslim consumers their WTP a premium for certified halal labelled meat at the supermarket (Table 4) above the actual price at the Islamic butcher, only 17.8% declares to be willing to pay a premium compared to 62.9% at the butcher shop. Considering only those consumers who would like to buy halal meat at the supermarket, 35.3% of them are willing to pay a premium to obtain extra reassurance about the halal status. Cross-tab analyses show that especially consumers with a higher family income ($\chi^2$=8.142; p<0.005) and high acculturated consumers ($\chi^2$=5.711; p<0.05) are willing to pay a premium. Looking at the results of the logistic regression analysis for willingness to pay a premium at the supermarket or not (see Table 4), expected benefits from buying at the supermarket and trust in halal meat status seem to determine the WTP ($R^2$=0.57). Generation only tends to influence Muslims WTP for certified halal meat at the supermarket. Consumers who perceive more benefits from buying halal meat at the supermarket, consumers who are more concerned about the halal status of meat they're actually buying and first generation consumers are more willing to pay a premium for extra reassurance about the halal status through a label in the supermarket.



Muslim consumers are willing to pay a mean premium of 1.33 € or 19% above the actual price of 6.90€ for 1kg chicken fillet conditional they are willing to pay a premium which is more ore less the same premium as at the butcher shop (17.9%). As we mentioned before, only 17.8% (n=38) of all respondents are willing to pay a premium in the supermarket, therefore too little observations were available to perform a valid linear regression analysis on the payment ladder responses. A follow up question that required respondents to indicate how sure they were about their stated WTP bid showed that 90.4% of respondents declared to be at least 80% sure that they would pay their stated WTP bid. 72.3% stated to be at least 90% sure of their bid.

## 5 Discussion and conclusions

This study confirms that Belgian Muslim consumers attach relatively high importance to the credence attribute 'Islamic production method'. Furthermore, the extrinsic search characteristic relating to 'Muslim ownership' of the shop seems to be used to infer the halal status of the meat rather than a halal label. The very limited availability of halal labelled fresh meat in Belgium could explain these results. In markets dominated by traditional supply chains, consumers who are not accustomed to pre-packaged food products do not pay particular attention to extrinsic quality cues that are specific to it (Krystallis et al., 2007). Furthermore, sales at the butchers or at the farm gate are considered extrinsic signs of meat quality (McCarty 1 Henson, 2004; Grunert, 2006). Our findings herewith largely corroborate with the study among Muslim meat consumers in the UK (Allam, 2008).

Our findings show that especially young, more acculturated female Muslim consumers attach more importance to a label. Exploratory research already suggested that especially young and female Muslim consumers are in favour of a label not only as a guarantee for wholesomeness, but also as assurance of the halal status of meat (Bonne & Verbeke, 2006). Consumers who are more concerned about meat quality and eat meat less frequently indicate a more urgent need for traceability systems and certified quality assurance (Gellynck et al., 2006), characteristics corresponding to the most acculturated Muslim consumers in our sample. Control of halal meat by a trustworthy organisation seems to be a condition for buying at the supermarket as well as a perceived benefit from buying halal meat at the supermarket. A previous study showed that in general, Islamic institutions and information sources are perceived to be best placed for controlling and guaranteeing the halal meat chain in Belgium (Bonne & Verbeke, 2008b).

Certified halal labelled meat at the supermarket could thus function as quality reassurance on one hand and lead to convenience in shopping on the other hand hereby confirming earlier research with the same population (Bonne & Verbeke, 2006). The more acculturated and female Muslim consumers are especially in favour of shopping for halal meat in the supermarket on the condition that supermarkets meet several of their requirements concerning the strict separation of halal from non-halal meat and control and guarantee being the most important. Next to being a condition for buying, independent third party

control of halal meat by a trustworthy organisation seems also to be a rather important potential benefit from buying halal meat at the supermarket in addition to availability and convenience in shopping.

Nevertheless, only 35.3% of those willing to buy halal meat at the supermarket are also willing to pay a premium for certified halal labelled meat. Especially those consumers distrusting the actual status of halal meat, perceiving more benefits from buying at the supermarket and first generation Muslim consumers are willing to pay a premium for more certainty about the halal status of meat at the supermarket. The mean premium they are willing to pay is 19% above the actual price. Lack of confidence in supermarkets seems, on the other hand, the main motivator for not buying at this point of purchase, which was also reported among Muslim meat consumers in the UK (Allam, 2008). A topical question is hence whether certification could reduce risk perception at the Islamic butcher, still the main point of purchase for the majority of Muslim consumers?

Results show that a lot more Muslim consumers are willing to pay a premium for certified halal labelled meat at the Islamic butcher shop (62.9%) than in the supermarket. Muslim consumers would pay a premium of 17.9% extra above the actual price which is only a little less than their WTP for certified halal labelled meat in the supermarket. Hobbs (2003) also found a mean WTP of 20% to add food safety for a beef sandwich and 15.6% for a ham sandwich through Vickrey price auctions. The more importance attached to a halal label and the higher the present level of distrust in the actual halal meat status, the higher the likelihood that a Muslim consumer will accept a higher price for halal labelled meat. Umberger, Feuz, Calkins and Sitz (2003) also found that consumers attaching more importance to source assurance, locally-raised and country-of-origin labels are more likely to pay for a steak labelled as 'USA Guaranteed'. Furthermore, halal meat consumption frequency and age determine the actual premium Muslim consumers are willing to pay. Those eating halal meat more frequently and younger Muslims are willing to pay a higher premium for halal labelled meat. Angulo and Gil (2007), however, found that consumption level is negatively associated with price premiums for certified beef, probably because household food expenditure is constrained. Surprisingly, household income does not associate with WTP neither at the butcher shop nor in the supermarket. The presented premiums being only a small extra amount to spend could be a reason for this non-significance.

Nevertheless, results also show that confidence in the current assurance about the halal status of meat is the most important motivator for not being willing to pay a premium. Consumers who perceive meat as safe enough to eat are indeed less likely to pay a premium for certified meat (Angulo & Gil, 2007). Bonne and Verbeke (2008b) showed that, in general, Muslim consumers relate positively to the safety and wholesomeness of halal meat. Only a small segment of Muslim consumers are slightly worried about lack of control, information and hygiene, which is driving them to purchase (mainly non-halal) meat at the supermarket.

The findings suggest that certification of halal meat in Belgium could only persuade a part of the Muslim population to purchase halal meat from larger retail outlets. These concern especially the more acculturated and female Muslim consumers. Possibly, because of being



born in the host country and being the main responsible for food shopping in the household, these consumers have become more familiar with supermarket shopping, labelled foods in supermarkets and the benefits associated with labels (supplying information and quality reassurance). The desire to shop for meat like non-Muslims and to break with the shopping habits of their parents was already mentioned by Bergeaud-Blackler (2006). Studies on supermarket purchasing indeed show that higher socio-economic status consumers are more likely to switch to modern supermarkets because a higher opportunity cost of time is making multi-stop shopping in many small stores more costly for them than the one-stop shopping associated with the supermarket (Betancourt & Gautschi, 1990).

Nevertheless, this study faces some limitations with respect to the sampling procedure and sample characteristics and therefore generalisation to the entire Muslim population in Belgium and abroad remains speculative. With respect to the methodology used, Nessim and Dodge (1995:2) state that even if consumers reveal their true valuations of a good, this valuation may not necessarily translate intro real purchasing behaviour. Stated mean price premiums seem rather high and may be unlikely to be actually paid by consumers. The premiums are likely to be indicative of consumers' relative preference for an attribute (Loureiro & Umberger, 2007). Nevertheless, the insights provided in concerning WTP and its motivations in relation to the halal status of fresh meat through a label could be beneficiary for policy makers or private certifying organisations whose aim might be to establish a supervision mechanism for halal meat chains.

# Chapter 7

## GENERAL DISCUSSION AND FUTURE PROSPECTS

# 1 Recapitulation

Religion influences eating habits even within a new cultural environment. Muslim migrants in Europe are no exception. In order to meet the specific religious-inspired requirements, the meat chain needs to be adjusted to Islamic conditions for halal meat production and retailing in order to translate the desired process attribute into a set of principles, standards, and specifications of halal meat production, as presented in **chapter 2**. An integrated quality assurance system based on HACCP-principles with halal control points is needed, together with institutionalised monitoring, controlling, and guaranteeing of these principles, standards, and rules resulting in a halal meat status. This status can eventually be signalled to consumers by means of a label so as to reduce quality uncertainty in cases where domestic and civic quality coordination fall short.

The establishment of a halal quality label based on well-defined and externally controlled principles is likely to gain momentum both because consumers are increasingly keen on convenience in shopping and also because retailers are expected to play an increasingly important role in contemporary food chains. Hence, a major challenge pertains to shifting the construction of halal credence quality from domestic and civic coordination, where consumers rely on personal interaction for quality reassurance, to an industrial coordination of quality with a trustworthy label. However, technical constraints, the diverging opinions of stakeholders, lack of independent control mechanisms and lack of quantitative conclusive information on consumer needs and interests are all retarding this evolution.

Results from the qualitative research reported in **chapter 3** show that next to freshness and taste, slaughter method is one of the most important attributes of fresh meat among Muslim consumers. Health, faith and animal welfare are the main drivers for Muslim consumers to eat meat. Health factors in general are more relevant to the first generation of the immigrant community. This importance attached to the consequences relating to digestion and avoidance of cholesterol could be due to age effects within the first generation. Furthermore, male respondents of the first generation use colour as an indicator of freshness and the attribute of production region as a guarantee of health, next to a quality label. For the second generation, however, and for female respondents in particular, a label can be a guarantee of their health or the slaughter method. For female respondents, very strong sensory links are observed, either for the pleasure of their own meal or for others, especially their children. Finally, women prefer tender meat for convenience during cooking and express their preference for easily available meat for convenience in shopping. In general, the motivational structures as presented in chapter 3 for Muslim consumers facing meat purchasing decisions are more complex and richer than for non-Muslim Belgians. Obviously, the higher value of "faith" does not emerge in non-Muslim Belgian consumers' motivational structures, but the same goes for "respect" and "tradition", which are also not part of non-Muslim Belgian's motivational structures when buying meat. Therefore, the role of religion within a migration context in halal meat consumption decision-making in Belgium and France was furthermore explored using the Theory of Planned Behaviour (TPB) with

special attention to self-identity (religion) and acculturation (migration context). The results of these studies are set forth in chapter 4.

Quantitative research in France (**chapter 4**) shows that in general, a positive attitude towards halal meat, the influence of peers and perceived control over consuming halal meat determine halal meat consumption. In Belgium, a positive attitude towards the wholesomeness of halal meat and safety barriers seem to be particular influences on halal meat consumption. Barriers related to meat safety negatively influence the intention to eat halal meat, which is consistent with our findings that health is an important motivator for consuming it.

In both countries, the perceived availability of halal meat does not seem to be a barrier for consuming it. Neither is consumption, contrary to what was presumed after the first qualitative research (chapter 3), strongly driven by habitual behaviour. Possibly, the importance or personal relevance attached to halal meat (which is high in our sample, given the specific religious context) dominates preference for convenient, readily or easily available food products. In addition, the improved availability of halal food products the last 10 years in France could also explain the non significance of perceived availability in France.

Adding self-identity to assess the role of religion and acculturation within a migration context in the model by splitting the group into consumers with low self-identity versus high self-identity and low acculturation versus high acculturation leads us in both countries to different models in the four groups, with low self-identifying Muslims and highly acculturated Muslims displaying the best performing TPB models. In general, Muslims report a slightly positive acculturation score; however, Muslims in France and Belgium tend to retain their dietary habits despite a relatively long stay in the respective host country. Splitting the total sample into groups with different acculturation degrees showed that French low-acculturated Muslims rely completely on their positive attitude towards halal meat whereas high dietary acculturated French Muslims rely on attitude and perceived control. In Belgium we found that the more a Muslim is acculturated, the more halal eating becomes a matter of health attitude, animal welfare concerns and safety consumption barriers, thus confirming results from qualitative research that halal meat is perceived as being healthy and respecting of animal welfare concerns. However, here we could explain the findings that actual practices with respect to animal welfare prevent highly acculturated, and also low self-identifying, Muslims from eating halal meat, which would be in line with findings reported from non-Muslim consumers.

With respect to self identification with Islam, Muslims in France and Belgium have a relative high self-identification score. Splitting the total sample into groups with different degrees of self-identity showed that the less a French Muslim identifies with Islam, the more eating halal meat becomes a personal conviction without being influenced by others or religious prescriptions. Although Islam prescribes meat consumption to be halal, it remains the individual's own personal choice to eat halal or not. These consumers, especially Muslims of second or third generation, do not follow blindly the dietary rules but make a well thought over decision. Once this decision is made, halal meat consumption can become habitual (see a positive correlation between personal conviction and habit): they do not have to



repeat thorough active reasoning for every purchase or consumption decision. This finding explains the tendency of habitual behaviour among the second generation in the exploratory research of chapter 3. A strong personal conviction about consuming halal meat among young Muslims also corroborates Bergeaud-Blacler (2006), who believes that eating halal is an expression of a rising Islamic attitude towards foods and clothing among young Muslims in France. In the Belgian sample, we found that less self-identifying Muslim consumers not only rely on a positive attitude but also on the attitudes of peers and perceived availability. Easily available halal meat products are thus important for them and probably these consumes are susceptible to the marketing activities of retailers who offer a selected assortment of halal meat.

In **chapter 5** we identified four consumer segments based on their confidence in institutions that could monitor and control the halal meat chain. The "Indifferent" consumers (segment 1) are undecided on who should control the halal meat chain and have as much, although only moderate, confidence in Islamic as in Belgian institutions. Among them, all sources are trusted to some degree, with Islamic sources being most trusted. However, these consumers display the lowest trust in Islamic sources of all the segments. They also have the lowest perception of the health and safety of halal meat and take safety issues into account when eating halal meat. Being aware about safety issues, they appear to eat less halal meat and buy relatively more at the supermarket. Nevertheless, the Islamic butcher remains their main place of purchase for halal meat. "Concerned" consumers (segment 2) are most worried about safety issues in terms of hygiene, control and information related to halal meat and possibly for this reason they tend to trust Belgian rather than Islamic institutions about monitoring and controlling the halal meat chain. They also report the highest trust in independent, media and commercial sources. However, their halal meat consumption is not negatively influenced by their concern. Although these consumers tend to trust Belgian institutions and have more trust in non-Islamic sources as compared to other segments, they display a relatively high Muslim identity and are relatively low acculturated. The fact that this segment has the highest share of first generation Muslims in Belgium (i.e. born abroad) possibly accounts for this specific profile. Consumers in segment 3 and 4 have most confidence in Islamic institutions with "Islamic idealists" displaying a very low confidence in Belgian institutions. Only Islamic sources are trusted to provide them with information about halal meat. They feel positive about the wholesomeness and safety of halal meat and perceive relatively few barriers to eating it, resulting in the highest meat consumption. Together, these segments form 60% of the halal meat market. Both segments buy halal meat almost exclusively at the Islamic butcher. However, "confident" consumers reveal the relatively highest purchasing frequency at the abattoir and farm. Price could be driving these consumers towards short distribution channels. However, earlier research revealed other motivations on top of price, such as information about safety and, even more important, personal reassurance about the halal status of the meat. Finally, the "Islamic idealists" are the youngest and have the highest Muslim identity. They display the most extreme responses towards trust in institutions and information sources: they feel extremely positive about Islamic institutions and sources and extremely negative about Belgian institutions and non-Islamic sources. They form an important market segment, since they

represent a substantial part of the persons responsible for meat purchases within their families in the future.

Apart from the identification of distinct segments, the main conclusion is that Islamic institutions and especially the Islamic butcher are best placed in Muslim consumers'opinion for managing the control of and communication about halal meat. Exploratory research in chapter 3 already suggested that the Islamic butcher is most trusted for information about halal status, whereas halal-labelled meat in supermarkets is often distrusted. With respect to the safety and wholesomeness of halal meat, Muslims in general display a rather positive attitude. However "Indifferent" and "Concerned" consumers are slightly worried about lack of control, information and hygiene. Nevertheless, in the case of halal meat, meat offered by a Muslim is always to be trusted even when information about its halal status is not directly available. It is a Muslim's responsibility to ensure the procuring of only halal meat, and, if the meat appears to be haram, this is the butcher's responsibility towards God. Nevertheless, Muslims are increasingly requesting a halal label informing and assuring them about the status and the wholesomeness of halal meat, especially the second or third generation Muslims who are breaking with the shopping habits of their parents based on an established personal relationship with the Islamic butcher. Once a label has gained consumer confidence, it can also become the basis for inference making; that is, other quality dimensions, in addition to what the label stands for, can be inferred based on the label. The question thus arises as to whether they are prepared to pay a price premium in exchange for halal meat status assurance through a label.

In **chapter 6** willingness-to-pay for extra reassurance about the halal status of meat through a label was studied. The results of this study show that Belgian Muslim consumers attach relatively high importance to the credence attribute 'Islamic production method'; however, it is the search attribute 'Muslim ownership' which seems to be used to infer the halal status of the meat rather than a halal label. The results also show that especially young, more acculturated female Muslim consumers attach more importance to a label. Earlier exploratory research showed that especially those young women want a halal label to meet both their need for information and convenience in shopping. These results are confirmed here. The more acculturated and female Muslim consumers are especially in favour of shopping for halal meat in the supermarket on the condition that supermarkets meet several of their requirements, with separation of halal from non-halal meat and control and guarantee being the most important. Next to being a condition for buying, trust in the halal status of meat seems also to be a rather important perceived benefit from buying halal meat at the supermarket, in addition to availability and convenience in shopping. The results show that a lot more Muslim consumers are willing to pay a premium for halal labelled meat at the Islamic butcher's (62.9%) than in the supermarket (35.3%). The more importance attached to a halal label and the more distrust in actual halal meat status, the more chance a Muslim consumer will accept a higher price for certified halal labelled meat at the butcher's. Furthermore, halal meat consumption frequency and age determine the actual premium Muslim consumers are willing to pay. At the supermarket, willingness to pay is influenced by trust in the halal meat status, expected benefits and generation. At the same time, the results also show that current assurances about the halal status of meat are the



most important motivator for not willing to pay a premium. It seems, therefore, that certification of halal meat in Belgium could only persuade half of the Muslim population to purchase at 'modern' supply chains, especially more acculturated and female Muslim consumers. Possibly, being born in Belgium and being the main person responsible for food shopping in the household, these consumers are familiar with labelled foods in supermarkets and with the benefits which accompany labels (the supply of information and quality reassurance).

## 2 General discussion

In this section, the testable hypotheses and research propositions presented in the introduction are discussed using the results of the above studies and additional qualitative data from focus group discussions. Three focus groups with halal meat consumers were conducted: one in Belgium (May 2007), one in France (June 2007) and one in the Netherlands (July 2007). Each focus group consisted of 8 participants. The homogeneity of the participants in the groups was limited to the fact that they were regular halal meat consumers and Muslims, except for one in each group, who was a non-Muslim halal meat consumer. Participants had to be 18 years or older and were selected so as to represent divergent levels of religious practice. Other characteristics such as education, economic or social status were not considered as recrutement criteria. The group discussions were tape and video recorded and NVivo7, a software package especially designed for the analysis of qualitative research, was used to analyse the transcripts. Verbatims from transcripts are used below as illustrations of the different hypotheses and propositions.

## 2.1 Religion in a migration context: impact on halal meat consumption decision-making

*Hypothesis 3: The most important driver of halal meat consumption is religion: self-identity positively influences halal meat consumption.*

*Research proposition 7: Next to religious motivations, health may be a major driver of halal meat consumption, as is the case for non-Muslim consumers regarding conventional meat.*

Results from qualitative research (chapter 3) show that in general, health, faith, respect (for animals), enjoyment and care for family are the main goals Muslim consumers strive for when buying meat.
A study of the motivational structures within the Muslim population makes it clear that halal meat is bought mainly for religious reasons. Some participants mentioned this in the focus group discussion. For example a male converted Muslim in France said *"I only eat halal; it is a religious choice, a life hygiene."* Another young male Muslim in Belgium said: *"But there are people who don't pay attention, that don't care, they juste eat. And it is not because you eat that you are going to die, that is not the question. It's a matter of believing."* One female participant in the Belgian group discussion told they did not use to eat halal consistently but now they do: *"Now I became halal, my parents as well. For 10, 15 years we are really strict ... The more religious we are, the more we find it important."* She added, however, that the present easier availability of halal meat is also positively influencing her halal meat consumption. In the quantitative research reported in chapter 4, we only found a positive relation between self-identification with Islam and eating halal meat (behaviour) in the Belgian sample. Although following the dietary rules may be an important motivator for consuming halal meat, there seems to be no clear or straight correlation between degree of religious practice and halal meat consumption. A person can consider him or herself a Muslim, without practising, and still consistently eat halal meat. One female second generation Muslim in the first qualitative study (chapter 3) said: *"I find it very important to follow the dietary rules of Islam, although I do not follow the other religious prescriptions."* Hence, reasons other than faith could additionally explain halal meat consumption, confirming the findings of Bergeaud-Blackler and Bonne (2007). Next to faith, health seems also to be an important driver of halal meat consumption. There is a very strong link between the Islamic slaughter method and health perception: it is believed to lead to the complete bleeding out of the animal whereby consumers believe less bacterial contamination can occur, hence resulting in healthier meat than non-halal meat. Protecting health seems to be one of the reasons why Shariah (Islamic law) was invented according to Yassin, a young participant in the Amsterdam focus group who had done theological studies. In his opinion, illegally slaughtered halal meat (slaughtered at home, for example) is not fit for consumption since veterinary inspection of the health status of the meat is necessary, even though this was not done in the prophet's era, since the environment has



changed and "chemical rubbish" did not exist at that time. A positive attitude towards the wholesomeness of halal meat indeed positively influences the intention to consume halal meat in the Belgian sample (chapter 4). For some consumers health even seems to transcend religion, as reported by a male Muslim in the Amsterdam focus group discussion: *"If I have the choice between organic non-halal meat and unhealthy halal meat, then I buy the organic, healthy meat. I know I am very ... not good, but health is my choice."*
We conclude with regard to this hypothesis and research proposition that halal meat consumption is mainly driven by faith and perceived healthiness of the meat. The third important motivation for eating halal meat, animal welfare, is discussed below. Nevertheless, it would be interesting to further research why non-Muslims buy meat at an Islamic butcher's. We hypothesise that they are mainly driven by practical motivations like opening hours, proximity and flexibility rather than by health and animal welfare. Additionally, price may be appelaing.

*Hypothesis 1: Attitude, SN, PBC and habit are determinants of halal meat consumption intention.*

For this hypothesis we refer to the research results reported in chapter 4. Quantitative research in France using the TPB shows that in general, a positive attitude towards halal meat, the influence of peers and the perceived control over consuming halal meat determine halal meat consumption. In Belgium, a positive attitude towards the wholesomeness of halal meat and safety barriers seem to be particular influences on halal meat consumption. In both countries, the perceived availability of halal meat does not seem to be a barrier to consuming it. Neither is consumption, contrary to what was presumed after the first qualitative research, strongly driven by habitual behaviour. Possibly, the importance or personal relevance attached to halal meat (which is high in our sample given the specific religious context) dominates preference for convenient, readily or easily available food products. Consumers who are highly involved with a product perceive the availability of a product less as a potential barrier to behaviour, and might be willing to devote more time and effort to obtaining it. This has already been shown, for instance, in the case of sustainable food consumption decisions (Vermeir & Verbeke, 2006) and can be confirmed by the qualitative research which concluded that Muslims are willing to put considerable effort into obtaining halal meat. In addition the improved availability of halal food products over the last 10 years in France (Bergeaud-Backler & Bonne, 2007) could also explain the non significance of perceived availability in that country. In similar vein, focus group participants explain that availability of halal meat nowadays is really no longer a problem and that even product choice has improved. One older lady in France reports: *"Today, things are very different from the 1940s when Muslim butcher shops just didn't exist. I grew up from 1949 to 1961 in a small place in the East of France, and there was no Muslim butcher shop. So once a month my father used to buy a sheep with thwo or three friends from the neighbourhood and they slaughtered at home."* In most big cities with an important Muslim community, halal meat is easily available: *"At Brussels, you know, there is a butcher*

*at every corner of the street. Sometimes, in one street, you have three, four butchers*[19]*."* Nowadays, even the choice of halal meat has improved: *"Honestly, the quality is much, much better than before and we can choose. We have processed meat products, for example".*

Although the results of both TPB studies did not show a very important influence of peers on halal meat consumption, illustrations from the focus group discussions did show some relevance of compliance to group norms within the Muslim community. The male participant in the Netherlands who preferred buying organic non-halal meat to unhealthy halal meat (see above) almost excused himself for this behaviour*: "If I have the choice between organic non-halal meat and unhealthy halal meat, then I buy the organic, healthy meat. I know I am very … not good, but health is my choice."* One young male Muslim admitted to eating non-halal meat in the past: *"I have been at school in East Flanders (Belgium), really there were no friends that were Muslim. I was surrounded by non-Muslims and so it was automatic when we were eating, I did eat with them. But what I want to say … if I had been living here it would not be the same, at least one Muslim friend would tell me not to eat. So it is a question of influence too."* In the first qualitative study (chapter 3), one female respondent also illustrates her fear of other Muslims when buying non-halal meat at the supermarket: *"… So I buy meat from the supermarket, but I find it hard when other Moroccans are in the shop. When my mother comes, I do buy halal meat."*

We conclude that hypothesis 1 is only partly confirmed, with habit not influencing the intention to consume halal meat. However, the classical TPB determinants of intention only explain variance in intention to consume halal meat to a small extent and the regression coefficients are rather low compared to other food choice studies using the TPB. Several methodological issues could explain the rather low regression coefficients and are discussed in the 'limitations and future research' paragraph (7.4).

*Hypothesis 2: The predictive power of the TPB components for halal meat consumption intention improves with the degree of acculturation*

*Hypothesis 4: Individuals with a lower (versus higher) self-identification as a Muslim, will rely more on individual factors like personal attitude, PBC, perceived availability and barriers compared to the motivation to comply.*

Adding self-identity to measure the role of religion and acculturation within a migration context in the model by splitting the group into consumers with low self-identity versus high self-identity and low acculturation versus high acculturation leads us in both countries (France and Belgium) to different models in the four groups, with low self-identifying Muslims and highly acculturated Muslims displaying the best TPB models.

French low acculturated Muslims rely completely on their positive attitude towards halal meat whereas high dietary acculturated French Muslims rely on attitude and perceived control. In Belgium we found that the more a Muslim is acculturated, the more halal eating

[19] The participant means in specific areas with a considerable Muslim community.



becomes a matter of health attitude, animal welfare concerns and safety consumption barriers.

Splitting the total sample into groups with different degrees of self-identity showed that the less a French Muslim identifies with Islam, the more eating halal meat becomes a personal conviction without being influenced by others or religious prescriptions. Although Islam prescribes meat consumption to be halal, it remains the individual's own personal choice to eat halal or not. These consumers, especially Muslims of second or third generation, do not follow blindly the dietary rules but make a well thought over decision. Once this decision is made, halal meat consumption can become habitual (see a positive correlation between personal conviction and habit): they do not have to repeat thorough active reasoning for every purchase or consumption decision. This finding explains the tendency of habitual behaviour among the second generation in exploratory research. A strong personal conviction about consuming halal meat among young Muslims also corroborates Bergeaud-Blacler (2006), who believes that eating halal is an expression of a rising Islamic attitude towards foods and clothing among young Muslims in France. Eating halal has become a means of Islamic devotion and a sign of an identity reserved to the Muslim community (Bergeaud-Blackler, 2006). In the Belgian sample, we found that less self-identifying Muslim consumers not only rely on a positive attitude but also on the attitudes of peers and perceived availability. Easily available halal meat products are thus important for them and probably these consumes are susceptible to the marketing activities of retailers who offer a selected assortment of halal meat. Nevertheless, the second quantitative study (chapter 5) in Belgium confirmed the abovementioned findings of Bergeaud-Blackler that for a segment of young Muslims with a high self-identity, defined as 'Islamic idealists', eating halal meat has become very symbolic.

In sum, hypothesis 2 is confirmed and can be expanded to the TPB model for low self-identification with Islam. For the fourth hypothesis, we did not find subjective norms to be more important for low self-identifying Muslim consumers in France. In the Belgian sample, only external peers (religious authorities or persons) seem to influence those consumers with regard to eating halal meat.

*Research proposition 13: Muslim consumers believe that Islamic slaughter does respect animal welfare in spite of the general negative public opinion on the ritual slaughter process*

In the Belgian sample (chapter 4) we found that the more a Muslim is acculturated, the more halal eating becomes a matter of animal welfare concerns in addition to health attitudes and safety consumption barriers, thereby confirming results from qualitative research that halal meat is perceived as being healthy and respecting animal welfare. Chapter 2 already showed that respecting animal welfare before and during slaughter is a religious prescription. Hence, Muslim consumers are convinced that the Islamic slaughter practice (which is basically equivalent to slaughter without stunning) is the most animal friendly way to slaughter, despite general public opinion in Europe which finds it rather

cruel, and despite academic literature on animal welfare which describe several animal welfare issues related to slaughter without stunning.

A deeper probing into the issue shows that focus group participants in France cannot envisage that the religious rules are observed in practice; they gave halal 'foie gras'[20] as an example. Some participants could not perceive of foie gras as conforming to halal norms since animal welfare is not respected during production. Within the Dialrel EU project, special attention was given to the use and acceptance of stunning during Islamic slaughter in the focus groups. In general, Muslims perceive stunning to be incompatible with the Islamic slaughter method for several reasons. First, they find stunning cruel for the animal and second, they are convinced it kills the animal and therefore its meat becomes haram even when it is subsequently slaughtered in a proper manner. They, furthermore, think that less blood will drain when stunning is used. *"Concerning the animal welfare, it seems to me a bit dishonest. Normally, the blade stroke is meant to separate the brain from the body all at once! So the brain gets no more blood, the animal is therefore instantly unconscious. Whereas the stunning takes place at the moment of death, I think, yet I'm not sure, I'm not a scientist… it is deduction. What's for sure is that the carotid irrigates the brain, and once it is cut, the link is directly disconnected. Without even noticing that one is dying or… therefore, stunning, the electrocution, seems incompatible to me with the halal notion."* Several studies, however, demonstrated that the brain of animals present a risk of sustained consciousness during religious slaughter (Gregory et al., 2008). With respect to blood loss, this has been proven not to improve with a neck cut without stunning (Anil et al., 2006).

Only some Muslims, mostly those with knowledge of stunning practices, are convinced it can be used even for Islamic slaughter: "If I am correct, stunning is sometimes used. Stunning means easing the pain, feeling no pain, it's not dying. … I would like to say something to see whether it is better or not, if it is less halal or not, if we should still use the same slaughter method like in the past. When circumcising a little boy now, we do it with stunning with a surgeon in the hospital… should we still do it with a scissor without stunning? I say no, we can't. I prefer stunning with a surgeon… And if I can stun an animal and he wakes up later on with less pain so I can slaughter, I say yes. "

In general, focus group participants declared that their meat consumption was not influenced by animal welfare concerns. Caswell and Joseph (2006) suggest that environmental friendliness may not be a dominant driver in consumers' choice of a product but an additional and secondary consideration. Indeed, we found some focus group participants declaring this kind of secondary interest in animal welfare. For example, one male Belgian Muslim said he considered animal welfare when having the choice: *"Every living creature has the right on respect, on well-being. When I go to the butcher and there's the choice between organic chicken and the other, I always take the one that is bio. Even for sheep, I try to find it, but when it is not available, I just take what there is."* On the other hand, one converted Muslim women in the Netherlands said that animal welfare was the only reason she abstained from meat consumption: *"I don't eat meat because I refuse to*

[20] The French focus group discussion was organised in Bordeaux, the French foie gras region where halal labelled foie gras is recently being sold.



*cooperate with the actual treatment of animals; it is strait against my feelings. … But if there were halal organic meat meeting all the religious requirements, then I would eat it."* We could explain the abovementioned findings from quantitative research which shows that actual practices with respect to animal welfare prevent highly acculturated, and also low self-identifying, Muslims from eating halal meat, which would be in line with findings reported from non-Muslim consumers (Verbeke & Viaene, 2000).

In sum, quantitative data on animal welfare knowledge and perception among Muslims are very limited. The findings from both qualitative studies (MEC and focus groups) should therefore be validated through quantitative research to give more insight into animal welfare concerns, included stunning, and its influence on meat consumption among Muslim consumers in Europe.

*Research proposition 12: Convenience in relation with food is becoming more important especially for second generation Muslim families*

We raised the question of whether Muslim consumers are looking for convenience in cooking just like non-Muslims are. Quantitative data on this issue is lacking and we can only use some exploratory findings from the MEC study and the focus group discussions. From the first qualitative research (chapter 3), we saw that convenience in preparing was not that important for consumers. This finding is confirmed by the last quantitative study (chapter 6), where the meat characteristic 'easy to prepare' received a very low mean score. However, in the focus group discussions some, especially female, participants did profess themselves happy with improvement in availability and spontaneously mentioned the admittedly limited choice of halal ready-meals nowadays. One Belgian female Muslim said: *"We start to have some halal caterers now…"* and a female Dutch consumer said she had found halal ready-meals in Amsterdam's Albert Heijn.

Nevertheless, the question of whether even Muslim consumers are attaching increasing importance to food preparation still needs further research so it can be answered with validated quantitative data.

## 2.2 Halal as a credence quality attribute

Results from qualitative research (chapter 3) show that next to freshness (search) and taste (experience), slaughter method is one of the most important credence attributes of fresh meat through which Muslim consumers strive for values such as respect for animal welfare, faith and health. Quantitative research in Belgium (chapter 4) confirmed that freshness and taste, next to hygiene, are the most important characteristics of fresh halal meat. Islamic production method and Muslim ownership follow the top 3 of most important attributes. However, it seems that the halal status of meat is still inferred from the search attribute 'Muslim owner' at butcher's rather than from a halal label. If the label verifies the credence process attribute, then it becomes a search quality attribute in the shop (Becker, 2000), leading to the desired convenience in shopping especially for female Muslim consumers.

We return to these issues of labelling and convenience in shopping in the following paragraphs.

*Research proposition 10: Just like non-Muslims, Muslim consumers express worries about the safety of halal meat*

In general, Muslims relate positively to the safety and wholesomeness of halal meat. As already noted, qualitative research showed a very strong link between slaughter method and health and safety perception: the Islamic slaughter method is believed to lead to complete bleed out of the animal, which consumers believe means less possibility of bacterial contamination and hence healthier meat. Protecting health seems to be one of the main reasons why Shariah (Islamic law) was invented according to Yassin, a young participant in the Amsterdam focus group. The results in chapter 4 also showed a positive attitude, including the health aspect, towards halal meat. It even positively influences intention to eat halal meat in the Belgian sample.

Nevertheless, in the Belgian sample, safety barriers prevent more acculturated Muslims from eating halal meat. Some consumer segments, those identified as 'indifferent' and 'concerned' (chapter 5), are indeed slightly worried about the safety of halal meat. A male participant in the Netherlands focus group is one of these concerned consumers: *"What worries me more are prepared meat products, I think they produce them in Turkey or that Turkish people make them. I am more worried about some stuff like colorants than whether the product is really halal, because it is much more important for my health. It's something that makes me think: is this healthy? So, first halal and then health, we moved one step forward than just looking at halal…."* The same participant declared later on in the group discussion that he preferred buying organic, non-halal meat to unhealthy halal meat. That organic halal meat is a potential niche market for Muslim consumers is confirmed by the focus group discussions in both the Netherlands and Belgium. Finally, participants in the Amsterdam focus group mentioned that European halal meat would be healthier than halal meat in their home countries, since food chains in Europe are more controlled than those in the latter areas.

In sum, it seems that in general Muslim consumers have a positive perception of the wholesomeness of halal meat and that only a minority of halal meat consumers are worried about its safety.

*Research proposition 8: Muslim consumers in general question the halal meat status of the halal meat they are currently buying*

*Research proposition 9: To decrease the risk related to the purchasing decision, Muslims buy meat at traditional channels, in particular Islamic butchers', where product authenticity and trust are mediated through personal interaction*

Halal being a credence quality attribute means that it is not visible and cannot be validated by the consumer even after experiencing the product, hence yielding potential quality



uncertainty during the (pre-) purchasing stage. Next to the safety of halal meat in terms of meat wholesomeness, trust in halal meat also relates to the certainty about the process attributes (i.e. meat processing and handling leading to the halal status). Results from quantitative research (chapter 6) show that Belgian Muslim consumers tend to trust that the halal meat they buy is really halal, with the first generation being more trustful than the second. That trust is a major issue for Muslim consumers is demonstrated through the focus group discussions, where participants almost immediately, after a brief introduction, started to discuss the problem of 'halal being really halal'. A Belgian female Muslim told us an anecdote*: "I used to live in Brussels and eh, I was rather young and I was with my mother and our habitual butcher was closed. Of course, I looked for another butcher and my mother asks him, even if he was an Arab. "Is your meat halal?" of course the butcher says yes, laughing. My mother finding this rather strange ..."but why do you laugh?" then the butcher says: "Are we sure that it is halal for everyone?"* Most participants did express their doubts about the halal status of meat, leading to the risk reducing behaviour of buying at the Islamic butcher's. Halal meat status can indeed be inferred from the search characteristic 'Muslim owner' and more specifically from his degree of religiousness, as mentioned at the group discussions. The more an Islamic butcher is perceived to be religious (having a beard, for example, is a sign of religiousness), the more he appears to be trustworthy. This attitude could be explained by the nature of the limited responsibility of Muslim consumers in this matter, as explained by Benkheira (2002): meat offered by a Muslim is always to be trusted even when information about the halal status is not directly available. It is thus a Muslim's responsibility to ensure the procuring of only halal meat, and, if the meat appears to be haram, then it's the sellers' responsibility towards God. A French female Muslim consumer said: *"When one sees halal written, then it means that they guarantee it is halal meat…and so why bother? We are responsible towards God only. We believe we did everything we could to go to a … uh, not to a Christian or an atheist butcher."* Nevertheless, not all Muslims are satisfied with this, as explained by a converted young Muslim woman in the Netherlands: *"So we could close our eyes, just because it is an easy solution. But we have the responsibility to gather knowledge, every one of us as individual Muslims."*

Another way to reduce the risk related to halal meat status is to do the slaughtering oneself or to witness it at the farm or slaughterhouse. However, this practice is fading away among second and third generation Muslims. A young female French Muslim explains: *"I remember when my father used to go to the countryside, in the fields, with a few other people, they would slit their own animals, and we all knew where they came from and we knew it was 100% halal."*

In sum, the answer to this research proposition is rather ambiguous. On one hand, Muslim consumers express some doubts about the halal status of meat and request more control and reassurance through a halal label, especially second generation Muslim consumers. On the other hand, they hide behind this limited responsibility of Muslim consumers, which seems to satisfy their consciences. A male participant in the Amsterdam focus group illustrates this ambivalence: *"You can have two different approaches and what I want to say is that we, as individuals, don't have to make it difficult for ourselves. Of course, you could*

*always ask yourself 'am I doing it right or not'. When going to the butcher and I see the butcher with a nice beard, then I think that his meat will be 200% halal. It is just how you look at it. But I don't think you can doubt without having facts or arguments to do so."*

*Research proposition 11: Convenience in shopping is a major shortcoming in halal meat retailing in Belgium*

*Research proposition 15: Muslim consumers' lack of trust in halal meat status positively influences their need for information through a halal label to reassure them*

Establishing a quality assurance system within the halal meat chain together with institutionalized monitoring, controlling, and guaranteeing of the quality principles, standards, and rules resulting in a halal meat label could shift the current civic and domestic orientation towards an industrial or even market coordination of the Belgian halal meat market (chapter 2). For consumers this could mean assurance of the safety of halal meat (in terms of halal status and meat wholesomeness) and convenience in shopping, a major challenge for today's Belgian halal market.

Results (chapter 6) confirm these challenges (convenience in shopping and reassurance) as being the most important motivations of Muslim consumers to shop at the supermarket once halal meat were available. Supermarkets do indeed need to take some conditions into account. Separation of halal from non-halal meat and control and guarantee from a trustworthy organization are mentioned as being the most important. Both motivations and conditions for buying at the supermarket are more important for highly acculturated and female Muslim consumers, confirming results from the first qualitative study, which concluded that young women are strongly in favour of a quality label for halal meat, not only for reassurance about the slaughter method but also for reasons of convenience in shopping. Bernués et al. (2003) confirm that young consumers attach greater importance to the label as a source of information. Nevertheless, we should bear in mind that halal meat is available in only some Belgian supermarkets (with a very limited choice) and therefore, the results displayed in chapter 6 related to buying at the supermarket are reported intentions from respondents based on a hypothetical scenario only. Results also showed that staying faithful to the Islamic butcher and distrusting the supermarket are the main reasons for not buying halal meat at this latter point of sale. The identified 'Islamic idealists' (chapter 5), being the future halal meat consumer, also reported buying mainly at the Islamic butcher's. However, will this outlet keep its favoured place in the future halal meat market?

Assurance of halal meat status and safety through a certified and trustworthy label seems a major requirement for a shift to a market oriented halal meat market. Nevertheless, credibility of the information source is one of the main factors determining the perception of credence quality attributes (Grunert, 2001), and therefore a credible institutionalised reassurance system should be put in place for halal meat. This leads us to the next hypothesis concerning trust in information sources and confidence in organizations or persons able to monitor and control the halal meat chain in Belgium. For these research



propositions, 11 and 15, we can conclude that convenience in shopping is gaining in importance for young female Muslim consumers. However, barriers such as limited availability and the lack of a trustworthy halal label are preventing them from buying at Belgian supermarkets today. In other European countries such as France or the Netherlands, convenience in shopping has been improved; both fresh and processed halal meat is available at the major retail stores in regions with a significant Muslim population. One Belgian female Muslim consumer said she sometimes goes to France to do some shopping: *"When we have the possibility we go to France at Auchan, there is a special halal shelve with everything such as merguez, chicken and turkey."* A Dutch female Muslim said: *"I always buy meat at the Moroccan butcher and lately at Albert Heijn. We have a new Albert Heijn for halal products. They have ..., because my daughter likes 'ham'*[21] *or some other stuff, we can not find everything at the Moroccan butcher, sausage or ham or so, they are made of chicken or turkey. And I can buy some ready-made meals there."* Another Dutch retail store, C1000, seems to have an even larger assortment of halal products - fresh meat, processed meat and ready-meals.

*Hypothesis 5: Muslims will display more trust in other Muslims and more confidence in Islamic persons or institutions for certiying halal meat*

The qualitative study (chapter 3) suggested that the Islamic butcher is most trusted for information about halal status, whereas halal labelled meat in supermarkets is often distrusted. These findings are confirmed by quantitative research showing that Islamic institutions and especially the Islamic butcher are best placed in Muslim consumers' opinions to manage the control of and communication about halal meat. When considering the four consumer segments defined in this study, 'Confident' consumers and 'Islamic idealists' (together forming 60% of the halal meat market) have most confidence in Islamic institutions, with the latter displaying a very low confidence in Belgian institutions. Only Islamic sources are trusted by this latter segment to provide them with information about halal meat. This finding is consistent with social capital theory, which states that individuals who are closer in social status or who have similar personal capital are more likely to trust one another (Glaeser, Laibson, Scheinkman & Soutter, 2000). For example, individuals who were raised in a particular religious tradition place more trust in others raised in the same religious tradition. On the other hand, those Muslim consumers who tend to distrust the current safety of halal meat in terms of wholesomeness and process attribute tend to have more confidence in Belgian institutions for controlling the halal meat chain. These consumers are in favour of buying (non-halal meat or halal meat) in a supermarket which provides them the assurance they are looking for. However, the question arises as to whether they are willing to pay a premium for this reassurance through a label.

In sum, this hypothesis can be confirmed, since Islamic sources are most trusted and Islamic persons or organisations receive most confidence from Muslim consumers about monitoring and controlling the Belgian halal meat chain.

[21] Normally, ham refers to pork meat, however, in this context we assume she means ham that is made of turkey or chicken meat.

*Hypothesis 6: Consumers distrusting halal meat status will be more willing to pay a price premium for reassurance through a certified halal label*

Results from the WTP study show that a lot more Muslim consumers are willing to pay a premium for certified halal labelled meat at the Islamic butcher's (62.9%) than at the supermarket (35.3%). The more distrust in actual halal meat status, the more chance a Muslim consumer will accept a higher price for certified halal labelled meat at the Islamic butcher's as well as at the supermarket. Nevertheless, results also show that current assurances about the halal status of meat are the most important motivator for being not willing to pay a premium. Consumers who perceive meat as safe enough to eat are indeed less likely to pay a premium for certified meat (Angulo & Gil, 2007). This last hypothesis can be confirmed.

Table **7-1** Conclusion testable hypotheses

| | **Testable hypotheses** | **Accepted/ Rejected** |
|---|---|---|
| 1. | Determinants of intention to eat halal meat are (TPB model): attitude, subjective norms, perceived behavioural control with perceived barriers and habit. | Partly accepted |
| 2. | The predictive power of the TPB components for halal meat consumption intention improves with the degree of acculturation | Accepted |
| 3. | Religious self-identity positvely influences halal meat consumption | Partly accepted: in Belgian sample only |
| 4. | Individuals with a lower (versus higher) self-identification as a Muslim, will rely more on individual factors like personal attitude, PBC, perceived availability and barriers compared to the motivation to comply. | Partly accepted: in Belgian sample only |
| 5. | Muslims will display more trust in other Muslims and more confidence in Islamic persons or institutions such as mosques or the Belgian Muslim Executive | Accepted |
| 6. | Consumers distrusting halal meat will be more willing to pay a price premium for extra information through a halal label | Accepted |



# 3 Main implications

Practical implications extend to several actors in the meat chain who could benefit from better insights into halal meat consumption behaviour. These are food producers, certification agencies, policy makers, communication experts and retailers.

First, the insights provided in chapter 2 on the dietary rules and critical control points for monitoring and control in the halal meat chain are especially relevant to private certification agencies and policy makers whose aim might be to establish a supervision mechanism for the halal meat chain. Additionally, they could benefit from the results presented in chapter 5 on who should monitor and control the chain according to Belgian Muslims, especially when taking into account that the trustworthiness of the label is crucial, both in general and more particularly when aiming at stimulating shopping at the supermarket.

General insights into meat consumption decision-making among Muslims as presented in chapter 3 and 4 are especially useful for food policy makers, halal food producers, communication experts and retailers wanting to target this growing segment with adapted product and communication strategies. For example, the finding that faith, health and animal welfare are important drivers of halal meat consumption, together with other insights into halal meat consumption decision-making, could inspire communication experts when developing marketing campaigns for halal meat. With consumers being at the beginning and at the end of the food supply chain, the insights into contemporary meat consumer trends among Muslim consumers could encourage further product innovation, for example organic halal meat.

For food retail chains, the understanding of the conditions for and perceived benefits of shopping for halal meat in a supermarket are especially relevant to targeting the Muslim population. Finally, results on Muslims' consumers need for reassurance through a label and their WTP a premium is especially beneficial for certification organisations and retailers.

In sum, the results presented in this thesis give those involved actors a fairly complete insight into Muslims' decision-making regarding halal meat in Belgium (and France), and are, therefore, highly valuable for those wanting to target this growing market segment.

# 4 Limitations and future research

## 4.1 Limitations

The classical TPB determinants of intention in both the French and Belgian sample (chapter 4) only seem to explain variance in intention to consume halal meat to a small extent and the regression coefficients are rather low compared to other food choice studies using the TPB. Several methodological issues could explain the rather poor performance of the

regression models. First, we opted to include a selected number of potential determinants of halal meat consumption, but other characteristics could also have been considered (in addition to the items in the present study), such as trust (Stefani et al., 2008), moral obligation (Shepherd, 1999), values (Vermeir & Verbeke, 2006), past behaviour (Smith, Terry, Manstead, Louis & Wolfs, 2007) or social identity (Thorbjørnsen, Pedersen & Nysveen, 2007). Second, the behaviour under investigation is a sensitive subject for the respondents because of its religious association. Research on a more 'neutral' topic (job search behaviour) with a similar respondent group in the Netherlands (Van Hooft et al., 2006) did result in higher regression coefficients of the TPB variables, suggesting that the low regression coefficients in our study are probably caused by the topic of the study and not by the specific population itself. Additionally, Malhotra and McCort (2001) have concluded that the TRA can be used in a non-western sample by taking culturally sensitive constructs and/ or measures into account. And recently, the TPB has been successfully tested in a Saudi Arabian sample concerning the effects of age and gender on new technology implementation (Baker, Al-Gahtani & Hubona, 2007). Several studies thus prove the cross-cultural validity of the TPB. Nevertheless, it remains quite remarkable that low self-identifying and highly acculturated Muslims display the best TPB models in both the French and Belgian samples, suggesting that the TPB variables best explain 'most integrated' Muslim consumers' meat consumption behaviour anyway. Item bias, referring to every difference in an observed score for which no corresponding difference can be found in the psychological domain to which the scores are generalized, could also be mentioned here. In their research on the effects of acculturation on item bias using a collectivistic and an individualistic ('Dutch') version of each item measuring the same theoretical construct, van Hemert, Baerveldt and Vermande (2001) found that the less one is acculturated, the greater the difference in response between the two items. The authors suggest that when comparing ethnic groups or groups with different levels of acculturation in research, a pilot study on the cultural bias of the items should be performed using two versions per item which reflect two different cultural backgrounds and testing their structural equivalence. This has not been done in the research reported in this thesis. A third methodological explanation is related to response styles such as acquiescence, extreme responding or use of the middle response category and response sets like social desirability which are said to occur especially in more personal or sensitive research domains (van de Vijver, Ploubidis & Hemert, 2004). Social desirabillity involves respondents to questionnaire items making themselves look good in terms of prevailing cultural norms (Mick, 1996). This response set, a term used to denote factors which are topic- and context specific, is especially important in personality scales or self-reports of sensitive behaviour where societal norms or the norms of referent groups might deviate from individual responses (Baumgartner & Steenkamp, 2001). This could be the case for some Muslim consumers regarding meat consumption. Social desirability consists of two factors: impression management (people's deliberate tendency to present themselves in a positive manner) and self-deceptive enhancement (people's tendency to provide self-reports that are honest but positively biased). Impression management is related to situational determinants, while self-deceptive enhancement is determined by individual characteristics. Even extreme responding - that is,



the tendency to select the endpoints of a response scale (Johnson, Kulesa, Cho & Shavitt, 2005) - could occur in this kind of study, since extreme responding tend to be more prevalent when the stimulus presented to the respondent is more meaningful to him or her (Gibbsons, Zellner & Rudek, 1999). In addition, some researchers (e.g. Van Herk et al., 2004; Johnson et al., 2005) have found extreme responding more prevalent among non-western ethnic samples than western ones. However, the opposite has also been suggested by others. Hence, further quantitative research, using the Greenleaf (1992) scale to detect extreme responding for example, is needed to validate the suggestion of extreme responding sensitivity among the French or Belgian Muslim population.

Furthermore, in the French sample (chapter 4), several constructs were measured as single items rather than multi-item constructs. In addition, it might be possible that the phrasing of some of our statements is responsible for the low regression coefficients (e.g. motivation to comply). In hindsight, because of the sensitive, religious, nature of the topic, some questions concerned with social or subjective norms, personal norms and personal relevance could be asked more indirectly.

Other methodological limitations relate to the WTP study (chapter 6). Nessim and Dodge (1995:2) state that even if consumers reveal their true valuations of a good, this valuation does not necessarily translate intro real purchasing behaviour. Stated mean price premiums seem rather high and may be unlikely to be actually paid by consumers; the premiums are likely to be indicative of consumers' relative preference for an attribute (Loureiro & Umberger, 2007).

Finally, the samples of the different studies were, with the exception of the French pilot study (chapter 4), taken from Belgium only. Respondents were selected using convenience and snowball sampling and they were contacted during a specific event in France. Each of these issues imposes limits on the generalisations from our findings to the broader Muslim migrant population living in Western European countries. Nevertheless, our findings shed some initial light on halal meat consumption decisions among the Muslim population in Belgium and France.

## 4.2 Future research

In the general discussion and limitation sections above, several propositions for further research were formulated. These are recapitulated below.

First, to improve the predictive power of the TPB model for halal meat consumption, several methodological aspects should still be investigated. Future research could focus on the cross-cultural validity of the TPB, especially among Muslim populations living in European countries. Although several studies have shown that the TPB model can be applied to non-western samples, our findings in France and Belgium indicate that the model worked best for the most acculturated and least self identifying Muslim. Hence, it appears that the TPB model best fits within western cultures. Item bias should therefore also be further investigated, together with extreme responding sensitivity, in this specific population.

Finally, additional variables such as trust, moral obligation, values, past behaviour or social identity could be included in the model to improve its predictive power.
Next, the question of whether more general contemporary consumer meat trends account for Muslim consumers in Europe still needs some further research to validate the thesis' findings. For example, whether Muslim consumers find convenience in preparing as important as non-Muslims could not really be answered and could be the subject of further research. Second, the findings on animal welfare from both qualitative studies (MEC and focus groups) should be validated through quantitative research to give more insight into animal welfare concerns, including stunning, and its influence on meat consumption among Muslim consumers in Europe. Finally, we posit that lack of shopping convenience in Belgium is a major weakness of the Belgian halal meat chain. However, our findings do not offer conclusive evidence that a certified halal label would provide them with this convenience. Related to this remark, the role of the limited responsibility of Muslim consumers should be further investigated to find out whether this prevents them from buying at the supermarket, since it is said that meat offered by a Muslim should always be trusted and western retail stores are owned and managed by non-Muslims. Is it therefore that Muslims, even second generation, stay faithful to their Islamic butcher? Or could a trustworthy label certified by a Muslim organisation take over this role and hence halal meat be sold and bought at western-style supermarkets?
Finally, it would be interesting to find out why non-Muslims buy meat at an Islamic butcher's. We hypothesise that they are mainly driven by practical motivations like price, opening hours, proximity and flexibility. Another research question could be why some Muslims eat non-halal meat. Is such consumption among Muslims mainly due to weak religious conviction or are there other motivations such as one-stop-shopping or quality reassurance?

## 5 Main conclusions

Halal meat consumption is mainly driven by religious motivations. However, health and respect for animal welfare are additional important drivers of halal meat consumption. With respect to health, halal meat is perceived as being very healthy and safe by most Muslim consumers, except for a minority who doubt about the safety of the halal meat they are currently buying. The Islamic slaughter method is also perceived as respecting of animal welfare, in spite of a general public opinion about ritual slaughter that is rather negative.
Positive attitude towards halal meat consumption influences the intention to eat halal meat on top of the motivation to comply and perceived behavioural control. Habit and perceived availability seem not to be significant determinants. Adding self-identity as a Muslim and acculturation, to measure the role of religion in a migration context on meat consumption, results in different TPB models for the four groups (low/high acculturation and low/high self-identity), with the least identifying Muslims and most acculturated Muslims displaying the best performing TPB model.



Although halal is typified as a credence attribute with trust being a major issue, Muslims in general seem to trust the halal meat status. However, this trust is based on personal relations with their Islamic butcher, their preferred place of purchase, rather than on institutionalised trust which could eventually be certified through a halal label. Islamic persons or institutions are perceived to be best placed to monitor and control the Belgian halal meat chain and their participation would result in the most trustworthy halal label. Those consumers who need halal meat status reassurance are even prepared to pay a slightly higher price for certified halal meat. A halal label could also provide Muslim consumers convenience in shopping, especially for more acculturated women who want to benefit from one-stop-shopping in conventional retail outlets such as supermarkets. Buying at a specialty store, demanding quality reassurance through a label and wanting to pay a little more for products with additional quality reassurance are typical risk reduction behaviours or uncertainty relievers related to a product with high credence characteristcs. These are the behaviours of the majority of halal meat consumers.

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# CURRICULUM VITAE

Karijn Bonne (°Brugge, 23 oktober 1978) behaalde haar diploma secundair onderwijs aan het Sint-Andreaslyceum Sint-Kruis te Brugge in 1996. Hetzelfde jaar begon zij haar studies Handelswetenschappen aan de Hogeschool Gent die ze met met grote onderscheiding beëindigde in 2000 In de optie Marketingmanagement. Sinds oktober 2000 werkt ze als assistent aan de Hogeschool Gent waar ze belast is met onderwijstaken, stagecoördinatie en begeleiding van afstudeerwerken binnen de vakgroep Marketing. In 2001 behaalde ze het diploma van Geaggregeerde voor het Secundair Onderwijs aan dezelfde hogeschool. Een paar jaar later, in 2003, start ze haar doctoraal onderzoek naar halal vlees consumptie bij Moslims in België aan de Universiteit Gent, faculteit Bio-ingenieurswetenschappen. Tenslotte beëindigt ze in 2006 haar doctoraatsopleiding.

Zij is auteur en co-auteur van verschillende publicaties in internationale tijdschriften en presenteerde haar onderzoeksresultaten op verscheidene internationale congressen. Sinds 2006 neemt ze deel aan het EU FP6 Dialrel project dat een betere verstandhouding en informatievoorziening nastreeft tussen en voor de stakeholders van religieuze slachting.

## WETENSCHAPPELIJKE PUBLICATIES EN PRESENTATIES

**Artikels gepubliceerd in internationale tijdschriften opgenomen in de 'Science Citation Index' (A1 publicaties)**

Bonne, K., Vermeir, I., Bergeaud-Blackler, F. & Verbeke, W. (2007). Determinants of halal meat consumption in France. *British Food Journal*, 109 (5), 367-386.

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